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Sommaire

Mécanismes de défense et stratégies d'ajustement au masculin et au féminin : étude structurale comparée basée sur la production artistique de personnes en rupture de projet de vie

Defence mechanisms and coping strategies in men and women: a comparative and structural study based on the artistic production of people suffering from a break-up of their life project

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Résumé

Une étude comparative portant sur des hommes et des femmes en rupture de projet de vie nous a permis d'examiner les manières typiquement féminines et masculines de faire face aux traumatismes, à l'angoisse, à la culpabilité, à la dépression et à la destructivité interne.

Dans un premier temps, une étude exploratoire à méthodologie quantitative et qualitative intégrée portait sur 206 sujets, se répartissant en plusieurs sous-groupes cliniques : sujets en grande précarité sociale et chômeurs de longue durée, demandeurs d'asile et réfugiés, toxicomanes, personnes incarcérées ou sortant de prison.

Dans un deuxième temps, des ateliers d'art thérapie ont été mis en place à leur intention, dans le but de les aider à trouver une ouverture à leur situation. La production artistique (dessins et histoires réalisées sous induction musicale) a été étudiée au moyen de grilles d'analyse de contenu originales, construites dans une perspective phénoménologicostructurale.

Nous allons présenter une synthèse de nos observations qualitatives, ainsi que les résultats d'études typologiques et structurales, réalisées au moyen de procédures statistiques non paramétriques sur N = 93 sujets. Ces données cliniques et expérimentales nous permettent de mettre en évidence les différences entre les genres et de définir des profils typiquement masculins et féminins dans la manière de faire face.
Des indications différentielles pour la prise en charge psychothérapeutique peuvent être dégagées de cette analyse.

Mots clefs : culpabilité, démotivation, mécanismes de défense, recherche sur les genres, stratégies d'ajustement, traumatisme.

Summary

A comparative study of men and women suffering from a break-up of their life project allowed us examining the typically female and male manners to cope with trauma, anxiety, guilt, depression and internal destructivity.
In a first stage, An exploratory study was focussed on 206 subjects, belonging to several clinical subgroups: people living in great precarity and long term unemployed people, asylum seekers and refugees, drug addicts, prisoners and people coming out of prison.
Secondly, arts therapeutic sessions were proposed with the aim of helping the participants finding an outlet to their situation. The artistic production (drawings and stories induced by music) was analysed with the help of original rating scales, constructed in a phenomenological and structural perspective.
We will present a synthesis of our qualitative observations, as well as some results of typological and structural studies, computed with the help of non parametric statistical procedures on the data of N= 93 participants. The results allow us pointing to gender differences and defining typically male and female coping styles.
Differential indications for psychotherapy can be extracted from these analyses.

Key-words: coping strategies, defence mechanisms, gender research, guilt, loss of motivation, trauma.

Mécanismes de défense et stratégies d'ajustement au masculin et au féminin

1. Introduction

A l'heure actuelle, l'hypothèse traumatogène des Etats- Limites [1] et de la psychose [2, 3] est discutée dans la littérature internationale. Les praticiens et les chercheurs s'interrogent sur la proximité des états post-traumatiques complexes, comportant une forte composante dissociative [4, 5], avec certaines facettes du fonctionnement limite, défini, selon l'approche structurale de la psychopathologie [6, 7, 8], par la prééminence du mécanisme de défense du clivage. Les réflexions théoriques portent sur la proximité des concepts de clivage et de dissociation.

Les discussions en cours sur la révision du DSM tiennent d'ailleurs compte de cette évolution, puisqu'il est prévu de modifier les critères pour la définition de la personnalité limite au sens de la psychopathologie dimensionnelle, admettant une plus grande continuité entre les manifestations normales et pathologiques, et de compléter la description des états post traumatiques en tenant davantage compte des manifestations dissociatives [9]. Une explication théorique récente des liens entre les traumatismes précoces et les manifestations dissociatives ultérieures propose comme facteur modulateur le mode d'attachement développé au cours de la première enfance. D'après des méta analyses récentes, basées sur un grand nombre d'études empiriques, les enfants confrontés précocement et de manière répétée à l'angoisse et au stress, sentiments engendrés par des réactions effrayantes ou des attitudes effrayées des personnes de leur entourage, auraient tendance à développer un mode d'attachement insécure, de type évitant, ambivalent ou désorganisé. Ce type d'attachement serait à la base des réactions dissociatives ultérieures [10, 11].

Nous nous sommes proposés d'apporter quelques éléments empiriques par rapport à ce débat touchant à la fois l'évolution des concepts en psychopathologie et les possibilités de prise en charge par la psychothérapie. Un projet de recherche pluriannuel, intitulé « L'organisation limite de la personnalité à l'adolescence. Considérations diagnostiques et thérapeutiques. Application aux adolescents et jeunes adultes en rupture de projet de vie », se compose de plusieurs études séquentielles, emboîtées et concourantes. Dans un premier temps, une étude psychosociale et clinique intégrée portait sur 206 sujets, se répartissant en plusieurs sous-groupes cliniques : sujets en grande précarité, chômeurs de longue durée, demandeurs d'asile et réfugiés politiques, toxicomanes, personnes incarcérées ou sortant de prison. Les personnes ont participé à des entretiens biographiques semi-structurés et à un examen psychologique approfondi, basé sur la passation d'échelles psychométriques, de tests projectifs et d'épreuves expressives. Cette étude a permis de dégager des profils différentiels au sein des personnes en voie de marginalisation et d'exclusion [12]. Notre étude exploratoire a été suivie d'une étude confirmatoire sur 195 sujets.

Dans un deuxième temps, des ateliers d'art thérapie ont été mis en place à l'intention des sujets, dans le but de les aider trouver une ouverture à leur situation. Plusieurs études antérieures (résumées dans [13]) avaient montré que la production artistique, issue d'une prise en charge par la psychothérapie à médiation artistique, peut être un moyen adéquat pour étudier le fonctionnement défensif des personnes. Afin de pouvoir utiliser la production artistique à titre de recherche, nous avons construit, dans une perspective phénoménologico-structurale, des grilles d'analyse de contenu pour la production picturale et littéraire, permettant de passer de l'analyse qualitative à la quantification et à l'utilisation des statistiques inférentielles et multidimensionnelles [14].

C'est principalement à travers les dessins et les histoires réalisées sous induction musicale que nous avons étudié les mécanismes de défense et les stratégies d'ajustement plus ou moins fonctionnelles ou dysfonctionnelles, susceptibles d'évoluer au cours du processus thérapeutique. D'autre part, nous avons voulu tenir compte de l'influence du genre, au sens biologique de sexe et au sens socioculturel de représentations liées à la masculinité et à la féminité. En effet, de nombreuses études récentes portent sur les liens entre la santé mentale et le genre [11]. Lors de notre étude explorant plusieurs groupes de sujets en rupture de projet de vie, nous avons donc examiné les manières typiquement féminine et masculine de faire face aux traumatismes, à l'angoisse, à la culpabilité, à la dépression et à la destructivité interne, problèmes rencontrés massivement dans les populations en voie de marginalisation et d'exclusion [15, 16, 17].

2. Aperçu sur l'état de la recherche épidémiologique

En général, un grand nombre de personnes en situation d'exclusion ont subi des violences, maltraitances ou négligences au cours de leur enfance [18, 19, 20, 21]. Même si les réactions aux traumatismes sont largement similaires dans les deux sexes, la recherche montre quelques différences dans les facteurs étiologiques et dans la manière de faire face. Nous allons passer en revue quelques études représentatives.

Dans le groupe des sujets en grande précarité, plusieurs études réalisées au cours des dernières décennies ont montré des différences entre hommes et femmes au niveau des facteurs biographiques traumatogènes. En effet, si bon nombre d'individus en situation d'exclusion ont été abusés physiquement par leur famille d'origine [22, 23, 24], l'incidence de l'abus sexuel semble particulièrement importante chez les femmes. Une étude de Bassuk [25], effectuée auprès de femmes résidant en foyer, a révélé qu'un tiers d'entre elles ont été abusées sexuellement dans l'enfance. Une autre étude a montré que 65% des femmes marginalisées souffrant de troubles psychiatriques ont été abusées sexuellement [26]. En ce qui concerne le placement en institution au cours de l'enfance, il est également fréquent dans les deux sexes [27, 28, 29] et semble un des facteurs

biographiques prépondérants de la grande précarité et de la condition SDF [30, 31, 32].

Parmi les réfugiés politiques et demandeurs d'asile, ce sont les hommes qui semblent plus vulnérables en ce qui concerne la marginalisation [33]. A cet égard, nous pouvons citer le phénomène d'acculturation [34, 35] qui renforce le traumatisme primaire, lié au déracinement culturel et affectif (séparation, affaiblissement des liens avec la famille et les amis, sentiment de perte), par un traumatisme secondaire, engendré par l'immersion dans une nouvelle culture. Il s'agit de la discrimination, des barrières de la langue, du manque de ressources sociales et financières, du stress et des frustrations liées au chômage [36, 37, 38]. Au Luxembourg, les hommes, généralement des réfugiés africains, sont davantage soumis au stress de l'acculturation parce qu'ils se présentent sans leur famille. Ils ont l'habitude de faire suivre celle-ci seulement lorsque leur situation s'est régularisée et se sentent complètement isolés dans un premier temps. Les femmes, par contre, arrivent dans une situation moins précaire et gardent davantage de liens avec leur communauté d'origine [39].

Par rapport à la consommation de drogues, toutes les études montrent que les femmes sont moins touchées que les hommes. Par contre, le risque d'être infecté par le VIH est supérieur chez les femmes, du fait de la prostitution [29]. Les femmes toxicomanes ont été plus souvent exposées à des violences physiques et sexuelles au cours de leur enfance, et ce de manière plus précoce et pendant des périodes plus longues [40, 41, 42]. Les études longitudinales prospectives montrent que les consommatrices de drogues qui ont été abusées sexuellement, restent dépendantes quatre fois plus longtemps que les autres. Leurs enfants souffrent parfois de séquelles liées à la toxicité des produits pris pendant la grossesse. Les mères toxicomanes ont des difficultés à assumer leur rôle de mère [43].

3. Données expérimentales

Nous allons présenter un tableau synoptique des données socio-biographiques de notre échantillon exploratoire, ainsi qu'une étude comparative et structurale des productions picturales et littéraires réalisées en atelier d'art thérapie par des personnes présentant des états post traumatiques complexes.

3.1. La répartition hommes / femmes dans l'échantillon de l'étude exploratoire (N=206)

La répartition hommes femmes est représentative par rapport aux données nationales sur la population des exclus.

Tableau 1 : Effectifs et données sociodémographiques des individus en situation de grande précarité, des réfugiés et des toxicomanes

Catégorie	Groupe total N = 206	Précarité sociale N = 70	Toxicomanes N = 63	Réfugiés N = 73
Age moyen	37,24 (19-74)	42,73 (19-74)	31,21 (19-46)	37,19 (20-62)
Genre H	178 (86.4%)	58 (82.9%)	52 (82.5%)	68 (93.2%)
F	28 (13.6%)	12 (17.1 %)	11 (17.5%)	5 (6.8 %)
Etat civil Marié	18 (8.7%)	0	0	18 (24.7%)
Divorcé	52 (25.2%)	33 (47.1%)	7 (11.11%)	12 (16.4%)
Célibataire	136 (66%)	37 (52.8%)	56 (88.9%)	43 (58.9 %)
Sans enfant	124 (50.2%)	38 (54.3%)	43 (68.3%)	43 (58.9%)
Instruction Primaire	22 (10.7%)	6 (8.6%)	0	16 (21.9%)
Secondaire I	61 (29.6%)	31 (44.3%)	11 (17.5%)	19 (26%)
Secondaire II	91 (44.2%)	24 (34.2%)	44 (69.8%)	23 (31.5%)
Post-secondaire	32 (15.6%)	9 (12.9%)	8 (12.7%)	15 (20.5%)

(d'après [39], 2006, p 24)

3.2. Etude des productions picturales et littéraires réalisées en atelier d'art thérapie

Nous allons étudier les mécanismes de faire face à la situation d'exclusion, de marginalisation et de précarité à travers l'étude de la production artistique. Notre échantillon se compose de 93 sujets, dont 79 hommes et 14 femmes, ayant suivi une psychothérapie d'accompagnement à médiation artistique pendant une durée de six mois au moins. L'étude comparative selon le sexe, basée sur les productions réalisées au début de la prise en charge, sera suivie d'une étude structurale comparée, effectuée dans le but de dégager des dimensions latentes.

3.2.1. Etude comparative selon le sexe : production picturale

Notre étude est basée sur les scores d'une grille d'analyse de contenu construite dans une perspective phénoménologico-structurale [14, 44]. Il s'agit d'une grille hiérarchisée, comprenant les dimensions principales suivantes: Composantes pulsionnelles, composantes réelles, composantes fictives ou symboliques, appréciation générale. Chaque dimension se subdivise en catégories exhaustives, mutuellement exclusives et faisant sens par rapport aux hypothèses de la recherche.

Tableau 2 : Etude comparative (test U de Mann-Whitney) : production picturale

Variables	U de Mann-Whitney	Signification bilatérale	Sens de la différence
Atmosphère positive	31	0	F>H
Harmonie des couleurs	35	0,001	F>H
Configuration figure / fond	43,5	0,011	F>H
Richesse des couleurs	54	0,012	F>H
Impression de vide	52	0,026	H>F
Solitude	52	0,026	H>F
Vision du monde idéalisée	58	0,034	F>H
Recherche esthétique	54,5	0,037	F>H
Atmosphère neutre	55	0,053	H>F (tend.)
Objets inanimés	60	0,057	H>F (tend.)
Assurance du trait	58,5	0,068	F>H (tend.)
Soin	59	0,085	F>H (tend.)
Thème existentiel religion	80,5	0,090	F>H (tend.)

Les femmes semblent plus portées vers l'idéalisation et l'élaboration artistique, alors que les hommes expriment plus directement leur solitude et le sentiment de vide de leur existence.

3.2.2. Etude comparative selon le sexe : production littéraire

Pour l'analyse des histoires écrites sous induction musicale, nous nous basons sur une grille d'analyse de contenu, construite d'après le même principe et comprenant les dimensions générales suivantes : Implication personnelle, qualité de l'élaboration imaginaire, type d'agressivité, qualités formelles, niveau d'élaboration, nature du conflit, thèmes archétypaux [45].

Tableau 3 : Etude comparative (test U de Mann Whitney) : production littéraire

Variables	U de Mann-Whitney	Signification. bilatérale	Sens de la différence
Dénouement	36	0,003	H>F
Autopunition	48	0,017	H>F
Alter Ego	51,5	0,034	H>F
Structuration	56	0,039	H>F
Originalité	64	0,081	H>F (tend.)
Conformisme	59,5	0,082	H<F (tend.)

Dans l'expression littéraire, les hommes dépassent les femmes en ce qui concerne les qualités stylistiques et formelles, ainsi que l'expression de thèmes existentiels significatifs. Les histoires des femmes sont plus conformistes. La capacité d'élaboration cognitive et le maniement des symboles linguistiques semblent mieux développés auprès des hommes appartenant à notre échantillon.

3.3. Dégagement de dimensions latentes au moyen de l'analyse d'homogénéité

L'analyse d'homogénéité ou analyse des correspondances multiples [46] permet de faire une analyse multidimensionnelle exploratoire sur données de niveau nominal et sur groupes restreints, cas de figure où l'analyse factorielle classique ne peut pas être appliquée. Nous présenterons les résultats des analyses en deux dimensions, séparément pour le groupe des hommes et des femmes et pour chaque médiation. Pour toutes les solutions, nous avons obtenu des Alpha de Cronbach $\geq .90$, ce qui indique que la consistance interne des dimensions dégagées est très satisfaisante.

3.3.1. Etude structurale des productions masculines

Analyse des dessins au masculin :

L'analyse du tableau des mesures discriminantes a abouti aux propositions de dénomination suivantes :

- **Dimension 1 :** Exécution soignée d'un thème lié à l'expression de besoins émotionnels inassouvis
- **Dimension 2 :** Expression directe de tendances destructives et dépressives

Analyse des histoires au masculin :

Proposition de dénomination des dimensions

- **Dimension 1 :** Capacité d'élaboration imaginaire de contenus archaïques
- **Dimension 2 :** Capacité d'élaboration cognitive de contenus émotionnellement investis

3.3.2. Etude structurale des productions féminines

Analyse des dessins au féminin

Proposition de dénomination des dimensions

- **Dimension 1 :** Elaboration artistique et créativité
- **Dimension 2 :** Manque d'implication émotionnelle liée à une mauvaise gestion de l'espace et du temps

Analyse des histoires au féminin

Proposition de dénomination des dimensions

- **Dimension 1 :** Expression du besoin d'appartenance
- **Dimension 2 :** Elaboration cognitive et artistique du thème de la guerre

3.3.3. Synthèse

Nous observons donc un recouvrement partiel au niveau des dimensions latentes, mais également des différences caractéristiques entre les sexes, les femmes se caractérisant davantage par la recherche esthétique, alors que les hommes sont davantage portés, d'un côté, vers l'élaboration cognitive, d'un autre vers l'expression non modulée de tendances destructrices et dépressives.

Les deux sexes expriment leur nostalgie et leurs besoins affectifs inassouvis, mais, pour les contenus négatifs, il y a des différences. Lorsque le thème de la discorde est exprimé, il est élaboré de manière artistique par les femmes, alors que l'agressivité crue a tendance à apparaître dans les dessins des hommes. D'autre part, les femmes semblent davantage insérées dans leur environnement socioculturel et tendent à reproduire les contenus conventionnels investis par leur communauté d'origine, alors que les hommes semblent plus fondamentalement isolés et produisent des œuvres plus originales.

Par rapport à la qualité formelle des productions, les femmes semblent davantage à l'aise dans l'expression picturale, alors que les hommes ont plus de facilité dans l'écriture de textes, du moins au début de la thérapie. Dans la production littéraire, les hommes sont davantage portés vers la quête philosophique.

4. Perspective typologique

4.1. Procédure générale

Dans le but d'explorer davantage le fonctionnement défensif, nous avons positionné les productions artistiques par rapport à une typologie dégagée lors d'une étude antérieure [44]. Il s'agissait d'une classification théorique dont l'adéquation par rapport à une répartition empirique avait été vérifiée au moyen de l'échelonnement multidimensionnel.

- Type 1 : Nostalgie du paradis perdu
- Type 2 : Fascination par la mort et les forces du Mal
- Type 3 : Graphismes et ornementation
- Type 4 : Fuite dans le banal
- Type 5 : Fragmentation et dislocation des formes

Or, par rapport à cette typologie, nous avions trouvé une répartition inégale entre les hommes et les femmes. Nous présentons les données en relation avec le

groupe d'appartenance. Au début de la prise en charge, les productions picturales se répartissent selon une configuration typique.

Tableau 4 : Répartition des types selon le sexe (N total = 93)

Types	Hommes						Femmes			
	Grde Précar		Réfugiés		Toxicomanes		Grde Précar		Toxicomanes	
	N	%	N	%	N	%	N	%	N	%
I	1	4,2%	4	12,9%	3	12,5%	2	20,0%		
II	4	16,7%	8	25,8%	3	12,5%				
III	5	20,8%	8	25,8%	11	45,8%	4	40,0%	3	75,0%
IV	6	25,0%	9	29,0%	5	20,8%	1	10,0%	1	25,0%
V	8	33,3%					3	30,0%		
Total	24,00	100,0%	31,00	100,0%	24,00	100,0%	10,00	100,0%	4,00	100,0%

Dans les deux sexes, les catégories correspondant à l'expression de sentiments authentiques (types I et II) sont moins représentées que les catégories indiquant un fonctionnement défensif (III), factuel (IV) ou déficitaire (V). La dernière catégorie a été rencontrée exclusivement dans le sous-groupe des personnes en grande précarité.

4.2. Analyse qualitative de la répartition des types selon le sexe

Dans la première catégorie, c'est-à-dire l'expression de la nostalgie du paradis perdu, les hommes et les femmes se rejoignent, mais avec une nuance plus aventureuse dans les dessins des hommes. Ceux-ci représentent plutôt une île tropicale sous le soleil, alors que les femmes ont tendance à dessiner une maison décorée avec amour. (figures 1 et 2)

fig. 1: La nostalgie au masculin

fig. 2: La nostalgie au féminin

Le type 2, correspondant à l'expression de l'agressivité crue ou de tendances dépressives envahissantes, est exclusivement occupé par les hommes.

En ce qui concerne les types défensifs 3 et 4, les hommes sont davantage portés vers la fuite dans le banal et le factuel, alors que les femmes utilisent davantage le graphisme et l'ornementation esthétisante comme style défensif privilégié .

La dernière catégorie, montrant la fragmentation et la dislocation des formes est rare. Elle se retrouve uniquement chez certains SDF souffrant de psychose chronique ou chez des toxicomanes invétérés présentant des séquelles neuro-psychologiques. Ces dessins, qui sont d'une pauvreté extrême, se rencontrent cependant chez un tiers des hommes et des femmes appartenant à notre sous-groupe de sujets en grande précarité.

4.3. Evolution au cours de la thérapie

Au cours de la thérapie, les productions appartenant aux types défensifs 3 et 4 diminuent alors que celles des types 1 et 2 augmentent. Ces productions plus authentiques préparent la voie à l'élaboration imaginaire et symbolique des tensions intrapsychiques dans le cadre sécurisant de la relation thérapeutique. Ici encore, nous trouvons une différence dans les styles selon le sexe, au sens ou les hommes recourent plus facilement à l'élaboration cognitive et philosophique, les femmes plus facilement à l'élaboration poétique, humoristique ou dramatique.

Exemple : Un toxicomane incarcéré qui, jusque-là, avait uniquement produit des dessins appartenant au type 4, c'est-à-dire la fuite dans la description et le banal (figure 3), réalise une peinture de type 2, montrant l'émergence de sentiments dépressifs plus authentiques, lors de 15e séance (figure 4).

fig. 3: Instruments de musique

fig 4: Le tombeau

Une évolution analogue, allant dans le sens de l'apparition de besoins clivés et occultés, apparaît dans les textes écrits sous induction musicale, avec une prédilection de style selon les sexes, les hommes tendant davantage vers l'élaboration cognitive, les femmes vers l'élaboration poétique.

Texte réalisé par un prisonnier toxicomane (20e séance)

« J'étais mort et j'ai ressuscité comme un phénix. Il ne me restait plus qu'à vivre, mais mes ailes sont ligotées alors que j'aimerais étendre mes ailes pour pouvoir explorer d'autres territoires de ce monde.

Je fortifie donc mon espérance dans un envol futur, envol devant me transporter haut dans les aires, et je m'entraîne à la patience. Dans une prison, il n'y a pas beaucoup de choses à explorer, parce qu'on est soumis à de nombreuses

obligations. Mais parfois, c'est peut-être mieux d'avoir d'abord l'occasion de voir clair en soi-même, afin de découvrir le contentement plus tard.

Plus tard, j'ai réussi à délivrer l'une de mes ailes et j'avais déjà l'impression de monter un tout petit peu. Mais je gardais les yeux ouverts et je me suis rendu compte que je pouvais seulement sautiller. Je devais donc m'avouer que je devais faire un pas après l'autre et, qu'en temps voulu, je pourrais libérer ma 2e aile pour pouvoir enfin découvrir des merveilles. »

Purcell : Fairy Queen

Texte écrit par une femme souffrant de précarité et d'exclusion (33e séance)

« Il était une fois un arbre qui habite dans la forêt. De toute façon, il ne peut pas se déplacer. C'est un arbre. Il peut seulement observer les gens qui passent. Il n'y en a pas beaucoup qui savent qu'on peut manger ses petites boules rouges mais elles sont très bonnes. Il suffit de cracher le petit noyau noir qui se trouve à l'intérieur. Des fois, il y a aussi des lutins qui passent, mais les gens ne peuvent pas les voir. L'arbre aime également quand, de temps en temps, il y a des groupes de gens qui font des fêtes pendant la nuit. Ils font de la musique très forte et dansent comme des fous. Ils exagèrent un peu dans tout ce qu'ils font. Alors là, les lutins ne peuvent pas dormir ces nuits-là. Je ne sais pas s'il vaut mieux être gens, arbre ou lutins. »

Beethoven : 3e symphonie

5. Discussion

Au cours des séances d'art thérapie, la production picturale et littéraire sert de point de départ à l'élaboration verbale, permettant de thématiser les émotions sous-jacentes et préparant la voie aux métacognitions. À la longue, cette interaction entre l'expression verbale et non verbale pourrait permettre aux sujets de développer des stratégies d'ajustement plus adéquates par rapport à la dépression, à l'angoisse et l'isolement. Chez les femmes de notre échantillon, le progrès personnel a passé par l'abandon graduel des contenus conventionnels et par la découverte d'un narcissisme sain et d'un style d'expression personnel, alors que, chez les hommes, nous avons assisté à une meilleure intégration de la violence archaïque, passant par l'élaboration cognitive et artistique.

Il faut souligner que, dans les deux sexes, les besoins amoureux et sexuels apparaissent rarement dans les productions artistiques, les conflits liés aux blessures d'amour-propre et à la gestion de l'agressivité l'emportant largement. Ceci pourrait s'expliquer par la prééminence de l'organisation limite apparaissant dans notre échantillon [47, 48]. Cette observation est d'ailleurs en concordance avec la littérature clinique et psychopathologique internationale étudiant des populations de même type [19, 49, 50, 2, 3].

Des méta-analyses rapportées dans la littérature de recherche récente [51, 52] ont mis en évidence des différences caractéristiques entre les hommes et les femmes, à l'intérieur d'une culture donnée: pour les conduites agressives, il y aurait une prévalence des hommes, alors que, pour l'attitude de compassion, il y aurait une prévalence des femmes. Ces constatations rejoignent les résultats d'études cliniques et épidémiologiques plus anciennes. Au cours des années 90, des études portant sur l'adolescence [53, 54, 55] avaient mis en évidence une plus grande prédisposition aux troubles de la conduite, au sens d'agressivité extériorisée, chez les garçons, alors que les filles auraient plus tendance à présenter des troubles émotionnels et des dépressions. Nos résultats apportent quelques renseignements complémentaires par rapport à des dimensions plus rarement étudiées, à savoir le fonctionnement défensif esthétisant, le sentiment d'appartenance, l'élaboration cognitive et philosophique des événements biographiques traumatogènes. Il faut souligner que, dans toutes les études, les différences liées au sexe dans la manière de faire face au stress, à l'angoisse et à l'isolement renvoient à une interaction complexe entre facteurs biologiques et facteurs socioculturels et ne doivent pas être interprétés dans un sens causal linéaire.

La plupart des études concernant les différences entre les sexes, respectivement entre les genres (représentations liées à la féminité et à la masculinité dans une culture donnée) sont basées sur des entretiens, des échelles psychométriques, des tests projectifs ou des observations de comportement directes. L'utilisation de la production artistique à titre de recherche peut apporter des informations complémentaires précieuses puisqu'elle permet d'explorer directement la capacité de mentalisation. Si nos résultats ne sont pas généralisables en raison de la taille réduite de l'échantillon, ils peuvent cependant ouvrir des pistes pour la recherche future.

6. Conclusion

L'étude de la production artistique réalisée lors des séances d'art thérapie par des personnes souffrant de précarité et d'exclusion nous a permis de dégager des profils spécifiques selon le sexe, l'expression des femmes étant plus concrète, plus conventionnelle et plus positive, celle des hommes plus abstraite, plus intellectualisante et plus déchirée. Cette approche différentielle pourrait contribuer à affiner les méthodes de prise en charge, en tenant compte de l'impact des perspectives typiquement masculine et féminine dans l'acquisition d'une identité plus solide et d'une représentation plus cohérente d'autrui [56]. Il faut cependant s'attendre à des prises en charge longues et difficiles chez les sujets qui étaient confrontés à des ruptures et à des pertes multiples depuis leur enfance [57].

La plupart des méthodes psychothérapeutiques connues s'adressent de manière indifférente aux hommes et aux femmes. Pour améliorer la prise en charge, il pourrait être opportun de tenir davantage compte des différences neurobiologiques et socioculturelles liées au genre, différences mieux connues à l'heure actuelle [11, 51] et modulant, entre autre, la gestion des émotions et l'adaptation au stress et à l'angoisse.

En ce qui concerne l'étude du processus thérapeutique, il pourrait être pertinent de développer davantage d'outils permettant de détecter les indices précoces d'une reprise du processus de subjectivation au niveau de la production artistique, étant sous-entendu que ces indices peuvent être spécifiques selon le genre. Il s'agit de pistes largement inexplorées.

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Management of acute diverticulitis in a tertiary care institution

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ABSTRACT

Background: Diverticular disease of the left colon is a common disease, mainly in the population over 50 years of age. The surgical management of acute diverticulitis is remains controversial, especially in severe forms.

Objective: This study aimed to evaluate the results of laparoscopic surgery for diverticular disease in a tertiary care institution with a specialist interest in minimally invasive surgery.

Design: All patients who had elective laparoscopic sigmoidectomy for diverticulitis within eight years at University Hospital of Luxembourg were selected from a retrospective database to evaluate laparoscopic benefit in moderate and severe disease.

Results: A total of 155 patients were divided in two groups: Moderate Acute Diverticulitis (MAD) and Severe Acute Diverticulitis (SAD) respectively. The short-term outcomes, after laparoscopic sigmoidectomy, were evaluated. There were not important differences between two groups.

Conclusions: The laparoscopic management of diverticular disease after moderate and severe crisis gives same benefits and short-term outcomes are similar. Elective Laparoscopic surgery is actually the standard of care for moderate and severe diverticular disease in our institution.

Key words: Laparoscopy, Laparoscopic Sigmoidectomy, Colorectal Surgery,

INTRODUCTION

Diverticular disease is extremely common in Western societies and industrialized countries, with a reported prevalence of 40-50 % over the age of 60 years. 30 % of these patients will develop complicated disease1.

Epidemiologic studies have demonstrated associations between diverticulosis and diets that are low in dietary fiber and high in refined carbohydrates. Other factors that have been associated with an increased risk of diverticular disease include physical inactivity, constipation, obesity, smoking and treatment with non-steroidal anti-inflammatory drugs2.

For these reasons, diverticulitis of the left colon, defined as inflammation and/or infection of diverticula, is increasing in incidence in population that has adopted the Western lifestyle3.

Abscess, bleeding, fistula, intestinal perforation and peritonitis are often major complications that these patients can develop.

The management of patients with acute diverticulitis is largely dictated by the stage of the disease at the time of hospitalization and by the response to the treatment that was initiated4.

Several authors believe that the conservative treatment of patients with diverticulitis is generally successful in cases without generalized peritonitis. On the other hand, there are many supporters of the invasive operative treatment for both moderate and severe cases of diverticulitis5.

When elective sigmoidectomy is indicated, the laparoscopic approach seems to be the ideal technique to perform. In fact, laparoscopic surgery for patients with colorectal cancer has been shown to be associated with reduced morbidity and shorter length of stay compared with patients who have had conventional open surgery6,7.

But similar positive results are demonstrated also in laparoscopic surgery for benign colorectal diseases8 even if particularly complex cases of diverticular colonic resections are frequently more difficult than colon cancer resection.

The aim of this paper is to report the management of diverticulitis and short-term of laparoscopic sigmoidectomy for diverticulitis in a centre specializing in minimally invasive surgery.

METHODS

This study is a retrospective analysis of a prospectively collected database of all elective laparoscopic sigmoidectomy performed between 2003 and 2012 at the University Centre Hospital of Luxembourg.

There were 155 patients who underwent surgery for diverticular disease, 87 men and 68 women with a median age of 56. The demographic characteristics of two

groups are shown in Table 1.

Table 1: Baseline demographics of the two groups

	MAD (n = 101)	SAD (n = 54)
Age at surgery (years)	56.5	56.9
Gender ratio (M:F)	50:51	37:17
BMI (kg/m^2)	26.5	26.6
Previous surgery	49 (48.5)	25 (46.3)
ASA score		
I-II	83 (82.2)	40 (74.0)
III-IV	18 (17.8)	14 (26.0)
Co-morbidity	67 (66.3)	23 (42.6)
hypertension	29 (28.7)	15 (27.8)
cardiovascular	10 (9.9)	11 (20.4)
pulmonary	10 (9.9)	2 (3.7)
diabetes	3 (3.0)	4 (7.4)
cerebrovascular	3 (3.0)	0 (0.0)
kidney	0 (0.0)	3 (5.5)
Crohn	1 (1.0)	0 (0.0)
rectal colitis	1 (1.0)	0 (0.0)

Values in parentheses are percentages unless indicated otherwise.

They were divided in two groups, moderate and severe acute diverticulitis (MAD and SAD), recovering the same classification already published by the authors9. Patients were defined as MAD if the left-lower quadrant pain episode required only antibiotic therapy and if there was a radiological evidence of diverticulitis on a computed tomography scan.
On the other hand, patients defined SAD were those with diverticula disease and one or more complication: abscess, phlegmon, perforation, fistula, obstruction, bleeding or stricture (tab 2).

Table 2: Pre-operative complications observed in the SAD group.

	SAD (n = 54)
abscess	32 (59.2)
perforation	25 (46.3)
fistulas	5 (9.2)
stenosis	4 (7.4)
bleeding	2 (3.7)

Values in parentheses are percentages.

Purulent peritonitis was indications for surgery and all patients with perforated abscess who had laparoscopy and washout were included in the study as SAD. On the contrary, patients with faeculent peritonitis underwent Hartmann operation

and were not included in the study.
Early complications were classified as complications occurring within 30 postoperative days (POD). These included: reoperation, rehospitalisation, anastomotic leak, wound infection, bleeding, transfusions, pulmonary and cardiac complications.
From 2003 to 2006, patients had preoperative mechanical bowel preparation whereas from 2006 patients didn't have a preoperative mechanical bowel preparation. All patients received, at the anesthesiological induction, standard intravenous prophylactic antibiotics as cefuroxime and metronidazole.
All patients were set up in the modified lithotomy position with a urinary catheter and nasogastric tube inserted. The surgical technique has been previously described9. In brief, the pneumoperitoneum was created with needle Verres in left hypochondrium. Regularly four to five ports were used. The optical 10–mm port was placed in the peri-ombilical region, one 10-mm port and 5-mm port were placed in the right-lower quadrant, one 5-mm port was placed in the left-lower quadrant and a last one 5-mm port was inconstantly placed in the right-upper quadrant for the liberation of the splenic flexure. The standard operating technique used was a media to lateral approach for left colon mobilization in all patients. The sigmoid arteries and veins were ligated separately by metallic clips, with care taken to preserve the hypogastric nerves. In all cases, the splenic flexure was mobilised to achieve a tension-free anastomosis and left ureter was identified. All anastomosis were stapled to the upper rectum using a circular stapler (Knight-Griffen technique). The extraction site of specimen was a short horizontal suprapubic (Pfannenstiel) incision protected by a wound edge protector. Abdominal drainage was done only in the cases of difficult surgery. All port sites >10 mm were routinely closed.
All patients were deemed ready for discharge when they were tolerating a soft diet, had return of bowel function (flatus or bowel movement) and bladder function, and adequate pain control with oral pain medications.

RESULTS

Symptomatic recurrent diverticulitis was the most common indication for surgery in MAD group and only one episode of diverticulitis was the indication for surgery in SAD group (Table 2).
The patients' average age at the time of the operation was 56,3 years (range 26-81). The rate of patients with previous abdominal surgery at the moment of laparoscopic sigmoidectomy was 61,1% (both supramesocolic and pelvic surgery). Patient's comorbidities included ischemic heart disease, heart failure, cardiac arrhythmias, cardiac valvular diseases, hypertension, diabetes and glucose intolerance, lung disease, cerebrovascular accident, Crohn's disease, ulcerative colitis and renal failure.

The seven patients (13%) with purulent peritonitis (Hinchey grade 3) underwent laparoscopic peritoneal lavage. This approach, with appropriate postoperative intravenous antibiotic treatment, was performed with success in all patients and allowed a laparoscopic resection in a second step. Intestinal stoma was avoided in all cases and thus the requirement for restoration of intestinal continuity (one of the drawbacks of Hartmann's procedure). The patients underwent elective sigmoid resection with primary anastomosis following a mean interval of 6 weeks. All seven resections were attempted laparoscopically without perioperative and postoperative complications.
Overall median length of stay was 10.5 days (Table 3). There was no significant difference in length of stay comparing the elective MAD group (7.2 days) and the elective SAD group (7.4) (table 4).

Table 4: Short-term outcomes by MAD-SAD

	MAD (n = 101)	**SAD** (n = 54)
Length of stay (days)	7.2	7.4
Conversion	2 (2.0)	1 (1.8)
Readmission	2 (2.0)	0 (0.0)
Reoperation	2 (2.0)	0 (0.0)
Complications (30 days)	15 (14.8)	3 (5.6)
anastomotic leakage	4 (4.0)	1 (1.8)
bladder perforation	0 (0.0)	0 (0.0)
wound infection	8 (8.0)	1 (1.8)
bleeding	1 (1.0)	0 (0.0)
bowel obstruction	2 (2.0)	1 (1.8)
evisceration	1 (1.0)	0 (0.0)
Mortality	0 (0.0)	0 (0.0)

Values in parentheses are percentages unless indicated otherwise.

The conversion rate was higher in the MAD group than SAD group. In 152 cases, the sigmoidectomy was made by laparoscopy. In 3 cases a conversion to laparotomy was necessary and the reasons of conversion were in all cases unclear anatomy: major inflammation (two cases) and pseudo-tumoral mass effect (one case). The conversion rate in the two groups was similar: 2.0% in MAD and 1.8% in SAD.
Ten of 32 patients with abscess had a collection diameter >4 cm. This radiological observation was decisive for a CT-guided percutaneous drainage. This procedure allowed us a better pain control and a quicker clinical response to antibiotics avoiding emergency surgery and increasing the likelihood of a single-stage surgical resection.
There were five anastomotic leak (leack rate = 3.2%). Of those, one patient

required abdominal exploration with abdominal drainage and one patient had a presacral collection that was CT-guided drained during a second hospital readmission. The rate of anastomotic leak in MAD group (4%) was higher than SAD group (1.8%). There were nine wound infections (wound infection rate = 5.8) with higher rate in MAD group (8.0%).

One patient (American Society of Anesthesiologists Grade 3) with a sigmoid stricture was hospitalized for intestinal obstruction. A transanal decompression tube over the stricture was placed endoscopically. This tool and preoperative nasogastric decompression prepared the patient to laparoscopic surgery four days after hospitalization.

For none of the patients no intraoperative iatrogenic ureter or splenic injuries were observed or intraoperative and postoperative transfusions were necessary.

In only one patient an intraoperative bladder lesion arrived. There was an important inflammatory adherence between sigma and bladder. In this patient of SAD group, the surgery was very complex but pursued in laparoscopy. The bladder perforation was closed using a intracorporeal manual suture. The urinary catheter was kept during one week in postoperative time. No others complications came.

There were no mortalities in this series.

The total short-term outcomes, morbidity and mortality are shown in *Table 3*.

Table 3: Overall short-term outcomes.

	(n = 155)
Length of stay (days)	10.5
Conversion	3 (2.0)
Readmission	2 (1.3)
Reoperation	2 (1.3)
Complications (30^{th} POD)	19 (12.2)
anastomotic leakage	5 (3.2)
bladder perforation	1 (0.6)
pulmonary complications	1 (0.6)
wound infection	9 (5.8)
cardiac complications	0 (0.0)
bleeding	1 (0.6)
bowel obstruction	3 (1.9)
evisceration	1 (0.6)
Mortality	0 (0.0)

Values in parentheses are percentages unless indicated otherwise.

CONCLUSION

The Sigma trial[8] is the only randomized controlled trial comparing laparoscopic and open diverticular resections for both complicated and uncomplicated disease. In this trial, consisted of 104 patients, the laparoscopic group was shown to have a reduction in major morbidity, reduced length of stay and better quality of life compared with open group. Our series of 155 patients who had elective sigmoidectomy for moderate and severe diverticular disease supports the view that laparoscopic surgery in the elective setting can be achieved with low conversion rates and acceptable morbidity.

The increasing and evolving role of laparoscopic surgery in the management of complex diverticular disease continues to gain traction. Our results support the view that laparoscopic surgery for diverticular disease can be performed with low morbidity and acceptable conversion rates in MAD and SAD, particularly if experienced surgeons perform it.

In our institution laparoscopic surgery remains the primary approach to diverticular disease and our results show that there is no reason for preoperative surgical selection between patients with moderate and severe diverticulitis.

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Music and Elderly

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Review on different applications for music in the field of Elderly.

"As soon as Amphion son of Zeus was playing, the stones were building themselves in a wall"

Abstract :

Since more than 3 decades now, music with seniors (or younger persons), either as an educational or recreational activity, but also as a therapeutically approach has progressed. Even nowadays, in the medical field, more and more studies prove its efficiency as complementary therapy with no known side-effects. The areas where music therapy has a positive outcome, reach from pulmonary disorders to a lot of neurological chronic diseases, including aphasia, dementia or Parkinson. And at the end of life, music therapy has found a remarkable place for expressing or supporting strong emotional feelings. Evidence-based results on physiological and hormonal changes will also be reviewed.

Résumé:

Depuis plus de 3 décades maintenant, la musique avec des sujets âgés (ou moins âgés) a fait de grands progrès : aussi bien en tant qu'activité éducative ou récréationelle, mais surtout aussi comme thérapie. Même aujourd'hui dans le monde médical, de plus en plus d'études montrent son efficacité comme thérapie complémentaire dépourvue de tout effet secondaire. Son champ d'application avec effets statistiques positifs, s'étend de la pneumologie aux pathologies neurologiques chroniques, de type aphasie, syndrome démentiel et maladie de Parkinson. En soins palliatifs, la musicothérapie est un outil incontournable pour faire exprimer et aussi supporter des émotions très fortes. Les variations positives en physiologie et en hormonologie seront rapportées .

Key words : seniors – diseases – music therapy - efficacy
Mots clés : sujets âgés – pathologies – musicothérapie – efficience

1) Historical background:

In the greek mythology music and medicine were intimately linked together. In the tale the God of music, Apollo, falls in love with Coronis and seduces her after which point she becomes pregnant with the future Asclepius, the God of medicine, both called healers. We know that music was already a very important tool in ancient greek times, as seen on different representations of the muses with

music instruments like a barbiton (350 before Christ) or the first known harp made of strings and wood which can be dated back up to 1500 before Christ. [*1)] Plato is said to have been very much interested in music and mathematics. In his famous book: "Peri Politeas/De Republica" he claims that whoever trains on music listening might reach his own soul! [*2)]

2) Definitions:

When speaking about music we need a clear definition and maybe a very nice description of what music can bring to people is given by Oliver Sacks in his famous book Musicophilia: "Familiar music acts as a sort of Proustian mnemonic, eliciting emotions and associations that had been long forgotten, giving the patient access once again to moods and memories… Faces assume expression as the old music is recognized and its emotional power felt…[*3)]

Another definition can be seen on a scientific asian website where music therapy is told "… an art of sound in times that expresses ideas and emotions in significant forms through the elements of rhythm, harmony, melody and colour…[*4)]

The webster's new world medical dictionary is speaking of: "The therapeutic use of music: there are many different definitions of music therapy ranging from the trivial (form of distraction that uses music as an aid to relaxation) to the lofty (the prescribed use of music to restore, maintain, and improve emotional, physical, psychological, and spiritual health and well being)". [*5)]

Music in its therapeutical approach brings together a lot of different professionals as seen in the Annals of New York Academy of Sciences by Hilleke et al. [*6)] They say that in order to achieve a kind of evidence-based music therapy, there must be an heuristic model which looks on the five major modulation parts that music may produce: attention, cognition, communication, emotion and behavior.

Now we can easily understand that music therapy involves professions from the behavioral social sciences, arts, natural sciences and of course out of mathematics in order to make statistical evaluations.
J Sonke [*7)] believes that more and more new disciplines (music therapy was first organized in the 1930's in the U.S.) will develop in this area: medical ethnomusicology, neurologic music therapy, etc

3) The first medical scientific articles, seen some centuries ago:

A first notified book, published in 1729, was written by Dr Richard Browne with the eloquent title: "Medicina musica or a mechanical essay on the effects of singing, music and dancing on the human bodies". There are some elements in his report which look still similar nowadays! Unfortunately, as reported in an article by Darrow, Gibbons and Heller,[*8)] this book is actually no more found . In the 18th century a well known physician in London Dr Brocklesby (member

of the Royal Society and fellow of the Royal College of Physicians) [*9)] published in 1749 a book entitled: "Reflections on ancient and modern music with the application to the care of disease". In this book he describes many of the ways music was used in the ancient world to affect the emotions, especially its use as a therapy – a function that is in his opinion worth to be revived.

Later M. A. Rorke in the Journal of Music Therapy mentioned that the main arguments of Dr Brocklesby were the following "…the mind has a faculty or disposition, to be pleased or displeased with certain airs, or systems of sounds... …The best remedy for delirium is music, as it awakes the attention in the most agreeable manner, relieves the anxious mind by substituting a more agreeable series of images…"
He recommended music for pregnant women or maniacal "cases" and was even suggesting "to listen to the music of GF Haendel: L'Allegro, il Penseroso ed il Moderato (HWV 55)", as he was convinced of its healing power.

Specifically concerning age, Dr Brocklesby was speaking of "… Age is caused by the dissipation of animal spirits. The aim therefore should be to conserve the store of animal spirits, which is depleted by immoderate passions, pain, excessive evacuations and the like. All should recreate their spirits everyday with a piece of good music!" [*10)]

Already in the late 90's of the 19th century (1891) Doctor Pieterson [*11)] was quoting in a famous medical revue (British Journal of Psychiatry) that music had an influence on mental disorders and in acute situations there could even be too much excitation for the patient. "In the period of convalescence however music would be found of value if precautions were taken against undue excitation of the imagination and an excessive rousing of the passions"… The factors of music listening that come into play are numerous: use of vocal, instrumental or concerted music: the instrumentation, the tone, musical colour, rhythm, individuality of the hearer and his/her cultural and mental development…; meaning "the same music used to have different effects on different psychic states".

In 1897, Newington in a paper called " Some mental aspects of music" [*12)] has made a speech at the Annual Meeting of the Medico-psychological Association at Newcastle on the topic of mental aspects of music and gave an interesting example of an organist accompanying a choir where he showed how much and how many different operations he had to carry out simultaneously in his brain: " Visually: he is reading the words which accompany the music, reads the music itself and looks forward to the next part; so he needs at least three sets of impressions on his visual center at the same moment – the past, for comparison and possibly connected directly with the present by a tied note, the present for immediate use, and the future which is necessary for him to know in order to prepare the coming physical movements. Auditorially: he has to assimilate the voices of his choir in order to time his accompaniment and often to correct or aid

the singers; he hears different vocal parts and in addition he hears and takes note of the accompaniment itself.
Kinesthetically: he is as busy: the hands have in rapid succession and in obedience to revived movement memories, to make as best they can complicated motions in playing the combinations of notes."

A couple of years later, a surgeon was writing to the JAMA (Journal of the American Medical Association) *13) on his experiences of a phonograph in the operating-room in order to "fill the ears of an anxious patient with agreeable sounds and thoughts".

4) Physiological, emotional and general changes through music and therapy:

In the Lancet of 2010, H Evans*14) reflects on music, medicine and embodiment: "first comes the own experience of listening to music, than its therapeutic effect by affects, expectations, memory and surely a bodily self-awareness" as he quotes. Therefore he says: "with music, we are often in movement: tapping, dancing, breathing to the rhythm of music is unique compared to other arts" … and concludes by saying: "….why music can always console us and, sometimes, can heal us."

In another article of the Lancet C. Conrad *15) speaks of the possible explanations concerning the relaxing effect of music. He found a reduction of several hormones: DHE, IL-6, etc and an increase in growth hormone, suggesting a possible immunomodulation through music.

Several studies have confirmed that over a short time period (5-7 weeks) music therapy can improve emotional and physiological status in different populations as seen in the following article of Zanini. *16)
Positive statistical changes ($p<0,001$) are seen in the questionnaire sf-36 (quality of life) and a reduction of blood pressure as well on systolic than on diastolic values compared to a control group ($p<0,001$).

A 22-items questionnaire sent to Swedish senior citizens (65-75 years) was explored by P Laukka *17) and came to the following conclusions: Specific music listening strategies and well-being variables are strongly positive ($p < 0,001$) for mood regulation and enjoyment in the personal growth as well as for a protective effect against depression.

Through the article of Suzuki et al from Japan, *18) we know that music therapy sessions can increase immunoglobulin A and decrease the amount of salivary chromogranin A (as a stress parameter) in elderly with dementia, ($p < 0,05$) .

5) Different applications of music in a variety of pathological diseases.

Several positive effects have been found in nursing studies as the following list

can show:
Skingley and Vella-Burrow[*19)] made a meta-analysis and found a number of studies where nurses could document positive results in a variety of fields such as: COPD, sleep quality, pain in osteoarthritis and confusion after operation.

Studies relating to music and specific disorders [*19)]

Study	Aim/questions/focus	Setting and sample	Method	Findings	Recommendations for nursing made in the study
Mc Caffrey and Locsin (2004)	To determine the effect of music on acute delirium and confusion in older people undergoing elective hip and knee surgery.	66 individuals aged 65+ in a large tertiary care centre in south east Florida.	Randomised controlled trial (RCT) comparing music listening with standard care.	Significant decrease in the number of episodes of post-operative confusion in music group compared with controls.	Music is an inexpensive, non-invasive therapy that can be initiated by nurses.
Mc Caffrey and Freeman (2003)	To study the effect of listening to music on pain in osteoarthritis.	66 community dwelling adults aged 65+ years.	RCT comparing music listening with 20 minutes of sitting quietly.	Pain levels decreased in music group compared with controls.	Intervention is appropriate for nurses caring for this patient group.
Lai and Good (2005)	To test the hypothesis that listening to music at bedtime results in better sleep quality compared with no music listening.	60 older people in Taiwan with sleep disorders.	RCT comparing music listening with no music listening.	Sleep quality improved in intervention group compared with controls.	Music is a quick, easy and low-cost intervention that can be used by nurses.
Bauldoff et al (2002)	To determine if music promotes adherence to a walking regimen post-pulmonary rehabilitation for chronic obstructive pulmonary disease (COPD)	24 patients aged 68+ years with moderate to severe COPD.	RCT comparing walking while listening to music with walking without music.	Improved functional performance in participants using music compared with controls.	Music is an inexpensive and easily implemented addition to a rehabilitation programme.
Mc Bride et al (1999)	To examine the feasibility of using music as an intervention for dyspnoea and anxiety in patients with COPD.	24 people, mean age 69 years, experiencing baseline dyspnoea, living at home in Canada.	Repeated measure study comparing measures with up to five weeks after music listening.	Significant decline in anxiety and dyspnoea following use of music at week 2, but not at week 5.	Listening to music is a potential intervention for relieving dyspnoea and/or anxiety in people with COPD.

We would like to pass now in review different diseases, where music has definitely a positive impact on the behavior or on the clinical outcome.

5 a) Neurological diseases:

A 1) Anatomical and physiological changes

We know from the neuroscientists Wan and Schlaug [*20)] that over time clear anatomical changes are reported and these differences are very important when you compare adults who are non musicians to adults playing music. Wan and Schlaug have also reported that the connections in the corpus callosum, for people practicing music, are definitely higher in number than for non-musicians as well as there are more activities in the frontal regions. As they explain: “new skill learning (singing or instrument playing) will enhance the brain’s plasticity”. Reference is made to an article which showed a delayed onset of dementia over 5 years for 75 years old people playing regularly an instrument, compared to the sporadically playing!
The main fundamental question still remains: “is it nature that produces this kind of anatomical changes or is it nurture by practicing music over years or maybe nurture **and** nature are they both responsible for these variations?“

Another study by Koelsch in the Annals of New York Academy of Science in 2005 [*21)] reports that areas in the cortex are activated differently as the music is either felt pleasant (activation of ventral striatum, presumably the nucleus accumbens, and anterior insula) or unpleasant (amygdala, hippocampus, temporal poles and parahippocampal gyrus).

Pickles and Jones [*22)] state, while reporting on different scientific outcomes, that there is of course no single brain centre for music processing, but it is worth to speak of fluctuating networks which produce a musical meaning.

Other neuropsychological changes can be seen in the study of Simmons and Stern [*23)] They made a double-blind study for thirteen patients with Alzheimer's disease (mean MMSF=Mini Mental Status Examination of Folstein: 14/30; mean age: 77 years) where 4 line excerpts where sung or spoken and people were asked for recognition of the spoken or sung lines, either if they would be regarded as new or old and known. In the group of people with dementia there was a statistical difference for recognition of sung compared to spoken excerpts (statistical difference $p<0{,}003$).

You et al [*24)] in their study choose memorizing tasks while walking compared to music listening and memorizing without walking: it was easier to memorize words or arithmetic tasks in the active group.

Houser and McDermott in the review Nature Neuroscience of 2003 were discussing the evolution of music faculty:

1. They pretend "that music is in some degree comparable to a kind of language". They announced the hypothesis of an initial state of knowledge for music prior to any experience with music and came to the conclusion that at least over different cultures there was a kind of universality for particular features of music p.ex. (scales around the octave). [*25)]

2. The second question was to know if this initial state of knowledge would be transformed by the experience of music. Here at least it seems obvious that in general, their might be a higher ability to learn music experiences while being a young child but this is not specific for younger people as other studies showed that there is still a possibility of positive experiences through music at an advanced age.

3. The third question they were asking was about evolutionally history on musical knowledge. In their article they conclude, just as Darwin, "that music evolved as a sexually selective system, designed to attract males; for instance different features of music perception are shared across species".

An article or a study reported by Wright and colleagues showed that apes could also judge two different melodies to be the same when they were transposed even by one or two octaves. [*26)]

In the article of Stephan Koelsch [*27)] speaking about " the neurology of music" he told us that the hippocampus is probably the most sensitive structure in the brain as it appears that it can be damaged by traumatic stress. On the other hand the inhibition of neuronal pathways to the hippocampus during unpleasant musical stimuli could be a mechanism to prevent such possible damage to the hippocampus. He concludes that "the processing of emotion" might have a temporal dynamic.

The effectiveness of rhythmic auditory stimulation vs. NDT (neurodevelopment therapy) /Bobath training was documented in a study, by M.H. Thaut et al;[*28)]. A group of persons (mean age 69 y) took part in a double blind study 3 weeks post-stroke and proved positive results for music sessions were found: + 13 m/min in velocity; + 0,18 m in stride length compared to the NDT group after 6 weeks (training was done 5 times a week for 30 minutes each session)

Even if functional MRI studies are rather rare, nevertheless Brattico at al [*29)] from Finland and Germany, made a very interesting study (but only in young persons!!) about happy and sad emotions in music, with or without lyrics. For instance, sad music with lyrics activates the right claustrum, parahippocampal gyrus and bilateral amygdala and bilateral auditory cortex and some areas more; whereas happy music with lyrics gives significant activation responses in the bilateral auditory cortex and in particular in the right middle and bilateral superior temporal gyri. As auditory regions alone respond to happy music with lyrics, this explains the role of acoustic cues for happy experiences in music and on the other hand the importance of lyrics for sad musical emotions expressed.

In the publication of Wan and Schlaug (cf. *20) on "Music is a tool for promoting brain plasticity across the lifespan", they reported a study of Bugos et al (2007) which showed positive effects of music education in old age for persons who never had been musically engaged before. They were all aged above 60 years and over a period of six months were taught intensive piano lessons. The active group receiving 30 minutes of training each week and being asked to practice at least 3 hours a week at home, showed over this half year improvements in their working memory.

A2) Implications in practice

We know that the capacity of memory can be greater when people are in a positive mood. Out of this research came a new specific aspect: the neurologic music therapy based on elements and principals of music and brain function.
What are the most important principals in the neurologic music therapy:

Thaut and Mc Intosh [*30)] tell us:

"Following our experiences you could articulate basic definitions in the model of neurological music therapy:

1) it is defined as a therapeutic application of music to cognitive, sensory and motor dysfunctions due to disease of the human nervous system,
2) it is based on neuroscience models of music perception and the influence of music on changes in non-musical brain functions and behavior,
3) treatment techniques are based on data from scientific and clinical research and are directed toward non-musical therapeutic goals,
4) treatment techniques are standardized in terminology and application and are applied as therapeutic music interventions which are adaptable to a patient's needs,
5) and last but not least, music therapy practitioners are educated in the areas of neuro-anatomy and -physiology and brain pathologies, medical terminology and rehabilitation of cognitive motor speech and language functions."

A 3) Neuroanatomical dissociation for emotion induced by music

Johnson and al [*31)] recruited two groups of neurological patients with focal brain lesions. The scientists explored where the feelings and autonomic responses can be dissociated by using music, a stimulus that has strong capacity to induce emotional experiences. The test included two brain regions predicted to be differentially involved in autonomic responsivity (the ventromedial prefrontal cortex) and feelings (the right somatosensory cortex).

The authors declare: "Patients with damage in the ventromedial prefrontal cortex were not able to give a normal skin conductance response to music from soundtracks but had normal subjective feelings in response to music. On the other hand patients with damage in the right somatosensory cortex were unable to give a self rating of their feelings in response to music listening but had normal skin conductance responses to music. The findings in conclusion showed that there was evidence for a double dissociation between feeling emotions and autonomic responses (to emotions), in response to music stimuli."

A 4) Music therapy and aphasia

It is known that actually in neuro-rehabilitation singing (relying mainly on right hemisphere brain activation) can help injured left hemisphere's speech centres to produce speech again. Another important element is that auditory verbal memory is better than visual memory. And in this way music can be seen as the most complex temporal auditory language.

M. Jungblut [*32)] shows that music therapy sessions may activate both hemispheres and through this can improve/ enhance the recovery of an aphasia compared to a simple spoken program: singing relies on the right hemisphere and word lists in songs activate both hemispheres while the spoken words will only activate the left hemisphere. As she writes: "speech by prosody and music by intonation

resulting in a combination, the singing which is a speech captured by music" D. Holmes [*33)] reports about the emotionfull recovery of the American Congresswoman G.G. in the Lancet /Neurology from June 2012.

A 5) Music and Parkinson's disease

We know already since several decades that a metronomic music or metronome by itself might help people with Parkinson to enhance a first step for walking. For this reason Oliver Sacks speaks of "kinetic melody" in his book on "Musicophilia".[*34)] Moreover he reports on several situations where people knew quite well different music excerpts or complete music parts: the simple fact of imagining this kind of music restored the possibility for walking.

In 1997 already, McIntosh, Thaut et al[*35)] proved that rhythmic auditory stimulation produces constantly better results for patients with Parkinson Disease (PD) in velocity ($p < 0,01$), cadence ($p < 0,02$) and stride length ($p < 0,03$).

Even some promising results can be seen through dancing parts, like the Argentine Tango, as reported by M. Hackney [*36)] (improvement for the PD group in one leg stance, functional reach test and falls efficacy scale).

A 6) Music and falls

A recent article from A.Trombetti et al [*37)] finds a positive effect for music based on multitask training for gait, balance and fall risk in elderly people and the authors conclude that there was a clear improvement through dual task conditions by increasing the stride length and decreasing its variability and by this fact resulting in a lesser risk for falls. This program lasted for half a year and people were all community dwelling individuals older than 65 years.

In Age and Aging, R. Shigematsu et al [*38)] concluded that a 3 days per week dancing program over 16 weeks improved significantly ($p=0,05$) single leg balance, functional reach and walking velocity around cones.

Interestingly another dual-task cognitive-gait intervention (only recruitment of elderly people with a history of falls) [*39)] explored the effect of memory recall while walking and showed that over a period of 6 weeks, (5 times a week for 30 minutes' sessions), this dual task exercise improves the memory performance compared to a control group of seniors who were just walking, listening to music but without a memory task to fulfill.

A 7) Music and depression

The study by Teppo Sarkämo [*40)] from Finland showed that music listening has a positive effect on depression and on confusional phases in people suffering of middle cerebral artery stroke. This difference was quite obvious for people

listening daily to music excerpts compared to those who were listening to audio books. (The excerpts were a mixture of tempos of Jazz, classic and spiritual music assembled.)

A further study by Moon Fai Chan [*41)] revealed a positive effect in a depressed elderly group ($p<0,001$, after 4 weeks on a GDS=Geriatric Depression Scale -15 items) and even a better sleep quality index compared to a control panel ($p<0,001$).

Finally another original research article was published recently by F. Guetin at al on music therapy and its impact on anxiety and depression in patients with Alzheimer's disease.
During a follow-up of 24 weeks, two groups of at least 50 people participated in weekly sessions of individual receptive music therapy. There was a significant decrease in anxiety $p<0,01$, in depression $p<0,01$ observed in the music therapy group from week 4 till week 16 compared to the controls. [*42)]

A 8) Music and Alzheimer's disease

In an article entitled "Music in dementia care: increased understanding through mixed research methods"; M. Hara [*43)] describes how music can play the role of a catalyst to build a new relationship. In the UK as well as in other western countries, Hara reports that over the last years was witnessed an increase among local community organizations and institutional groups in facilitating musical activities for members of older generations (mainly singing). In music therapy the meaning of music and therapeutic aspect is considered and knowing that music inevitably involves people, it can inherently been looked as a social process.

M. Thaut writes in the New York Annals how people with dementia (PWD) may enhance their memories through music: they use frequently the prefrontal amygdaloid network for memory tasks. [*44)]

Even for a couple of weeks (six), music sessions (three times a week for 30 minutes each) can already reduce BPSD (Behavioral and Psychological Symptoms in Dementia) significantly in a group of people with dementia (age in between 71 and 87 years).

Another study by Sil Hong is the song writing oriented activity (1x/week for 16 weeks) which was compared to a control group of people with memory impairments (dementia diagnosed; mean age 78 years): orientation could slightly be improved in some of the memory items compared to the control group while taking into account the total points of the Folstein test (significance $p<0,001$).[*45)]

A paper by Svansdottir and Snaedel [*46)] reports also on the reduction (in six weeks) of agitated behavior in people with dementia while being involved in a music therapy session compared to a control group and the significance on the

behavior scale was p<0,05.

The article on agitation by Ledger and Baker [*47)] shows a reduction on the CMAI scores (Cohen Mansfield Agitation Index) through music therapy sessions ($p < 0,05$) for verbal aggression opposed to control groups.

Cohen-Mansfield herself speaks of several positive effects through relaxing musical sessions in elderly above their 80's. [*48)]

Another recent Taiwanese study [*49)] (mean age = 82 years) for people with dementia and agitation declares that group music interventions over a period of 6 weeks, (twice a week) made a very significant reduction already after six sessions and was even holding on one month after cessation of the group activities (significance well below $p<0,001$).

Helmes and Wiancko announced in 2006 [*50)] the positive effect of 30' baroque music listening (Albinoni and Bach as compositors) in elderly inpatients of a general hospital. The sessions were done on successive days. A neutral observer recorded the times for shouts, bangs or use of call bells in these 30' time frames. Compared to a control group there was a reduction of at least 30% in the disruptive behavior.

An interesting question arouses through the article of W. Chatterton at al. [*51)]
They tried to analyze whether the singer or the singing was important in contact with PWD; and in the same way, if professional music therapists were better than volunteers.
The answers weren't as simple or clear as it might be expected.

A Swedish group involved in nursing studies made a qualitative "testing" as they choose either morning care with or without singing. It looks as if for normal morning care the PWD was somehow absent and "in his/her world"; whereas a +/- 20' nearly continuously singing brought back the contact to the PWD (he/she was present and willing to interact). [*52)]

In 2012, the Italian Psychogeriatric Association [*53)] made a review of the literature and came to the following conclusions: "Person tailored interventions, either active music listening or Music Therapy can help to manage the behavioral and psychological symptoms of dementia ". Beside this fact, the method seems to have a reasonable cost/benefit ratio!

A review of the literature by Sherratt et al [*54)] showed an overall positive response to music in the application for patients with dementia. A. Skingley and T. Vella-Burrows [(cf.*19)] made another summary of positive effects by music or singing for people with dementia.

Studies relating to music or singing and people with dementia *19)

Study	Aim/question/focus	Setting and sample	Method	Findings	Recommendations for nursing made in the study
Götell et al (2002)	Analysis of caregiver singing as a therapeutic intervention in dementia care.	Five caregivers and ten patients (80-90 years) in a dementia unit in Sweden.	Patients assigned to all of three conditions in rotation; background music, caregiver singing or control.	Music group was less aggressive, with mute responses. Singing group was co-operative with interaction. Control group showed limited carer-patient interaction and much resistance.	There is « support for the use of active music making by caregivers in dementia care ».
Remington (2002)	To examine whether modifying environmental stimuli by the use of calming music and hand massage affects agitated behaviour in people with dementia.	68 people with dementia (60 + years) in a nursing home in the USA	Four-group repeated measure experimental design to test effect of music, hand massage, music and hand massage combined, and no intervention.	Compared with no intervention, each experimental intervention reduced agitation, especially physically non-aggressive behaviours, up to one hour post-intervention.	Both interventions require little training and are easily administered by professional and lay carers.
Norberg et al (2003)	To compare the reactions of patients with dementia to three kinds of stimulation: music, touch and object presentation.	Two patients in the final stages of dementia (80 and 84 years) in Sweden (no setting details)	Participants stimulated with music, touch and object presentation over 12 consecutive days.	Both patients reacted differently to music than to touch and object presentation. « The subjective impression of the authors is that both patients reacted positively to the music ».	Caregivers 'attention should be drawn to the different kinds of patient reactions that they should look for and they should receive training in noticing these.
Janelli et al (2004)	To explore the effect of music on restrained patients.	30 restrained hospitalised patients (65-93 years)	Subjects exposed to : listening to music out of restraint, no music out of restraint, listening to music in restraint.	No significant differences between the three 'groups behaviour' but mean scores of positive behaviours were higher for the group listening to music out of restraint.	Listening to music is an appropriate nursing intervention as an alternative to restraint.
Hicks-Moore (2005)	Does relaxing music played during the evening meal reduce the cumulative incidence of agitated behaviours displayed in a group of nursing home residents with dementia ?	30 nursing home residents with significant dementia (70-101 years) in a special care unit in Canada.	Quasi-experimental (one group) design comparing exposure to music with no exposure.	Agitated behaviour decreased in weeks 2 and 4 when music was played, compared with weeks 1 and 3 when there was no music.	Music should be incorporated into the daily care regimens of nursing home residents and not limited to mealtimes.
Sixsmith and Gibson (2007)	To explore the role of music in the everyday life of people with dementia.	26 people with dementia (62-96 years) and their caregivers, in their own homes or in residential care.	In-depth interviews.	Music led to enhanced feelings of wellbeing, and encouragement of valued activities, increased social interaction and sense of empowerment.	Music can be a powerful medium for empowering and enabling participation in society.

5 b) Music and pain:

Already in 2001 the American Journal of Hospice and Palliative Care put online an article on single music therapy sessions and its effect on observed and reported levels of pain control.*55) The population assembled males and females up to 97 years of age and a positive effect on relaxation and on physical comfort, either independently reported ($p<0,0001$) or self-reported ($p<0,0005$) was found.

For instance in 2006 the Holistic Nursing Practice reported a study by Mc Caffrey and Locsin [*56)] including elderly people above 75 who undergone hip or knee surgery. They made the assessment of post-operative pain and acute confusion either with or without music. There was a statistical significant difference for people who received music sessions with CD-players in the postoperative days and the result showed a clear reduction of pain-medications taken and in the same manner fewer episodes of acute confusional status in post-operative situations.

5 c) Music and pneumology:

A study by Lord [*57)] "Singing teaching is a therapy for chronic respiratory diseases": in an English Medicine Newspaper from 2010 was reflecting on assessing anxiety and depression through the Hamilton scale and some sub-items of the sf 36 questionnaire (quality of life) in a population with a mean age of 65 years. One part consists in a singing group and the other in a control group and the highest statistical difference was a better heart rate recovery after exercise in the singing group ($p<0,03$).

5 d) Music and end of life

L. Magill showed in the American Journal of Hospice and Palliative Care [*58)] that music therapy session for bereaved caregivers "expressed a specific meaning of the music: the caregiver conveys the significance of music therapy in helping to enhance feelings of joy, empowerment, connectedness and remembrance and even hope".

R. Hilliard in his article [*59)] on empirical data points out that the most often applied techniques in palliative care are massage and music therapy. In his review he includes as well improvisation, song writing, instrument playing as relaxation techniques or lyric analyses.
In palliative care settings, it is reported that the music therapy was the one which consistently treated emotions, spiritual aspects, cognition and social and physical aspects.
Statistically significant changes ($p< 0,001$) for pain reduction, better physical comfort and relaxation were seen.

In a similar study, Horne-Thompson and Grocke [*60)] showed a significantly ($p < 0,005$) reduction in anxiety measured through the Edmonton Symptom Assessment System, again by single music therapy sessions for inpatients in palliative care services in Australia.
The results demonstrated other reductions in pain $p=0,019$; in tiredness $p=0,024$ and drowsiness $p=0,018$.

6) In conclusion:

Since several decades now, Music Therapy has been used successfully in different situations for elderly, either as a simple recreational purpose or in a specific manner to reduce stress, pain or other unpleasant emotions
A. Maratos et al. in the British Journal of Psychiatry[*61)] explains the positive effects in depression (even if the study she relates, concerns younger depressed persons!) through different dimensions: physical (in playing an instrument or in singing), relational (self-discovery, new experiences), aesthetic (self-confidence, hedonic) and finally social (interaction with others, group experience)
The question is still: do we have enough evidence-based research in this field as compared to other therapies [*62)] In times where cost-efficiency will be more and more important, music therapy must also be measured in a scientific way. The music therapists seem well aware of this, as mentioned in the article by Robb, Burns and Carpenter on reported guidelines for standardized music-based interventions. [*63)]

Finally I am convinced as techniques for brain functioning will be easily accessible for elderly in the future and with the results already shown previously, the explanations of the positive effects of music in general or in specific pathologies will get more and more obvious.

" MUSIC IS THE UNIVERSAL LANGUAGE OF MANKIND"

Henry Wadsworth Longfellow
(popular American Poet in the 19th century, 1807-1882)

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Die Verminderung des Schlaganfall-, Herzinfarkt- und Sterblichkeitsrisikos durch gesunde Ernährung und körperliche Aktivität

The reduction of stroke risk, risk of myocardial infarction and death by healthy diet and physical activity

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Abstract

There is no doubt that a healthy diet and regular physical activity improve risk factors for cerebro-cardio-vascular disease and death. However, there is less evidence from prospective randomised controlled trials that they also reduce the actual risk of stroke, myocardial infarction and death. The only evidence from randomised controlled trials is, that a mediterranean diet with nuts and/or native olive oil considerably reduces stroke risk by 47% respectively 31%, however not the risk of myocardial infarction and death. A low-fat diet, a low-salt diet, and the addition of omega-3 fatty acids have no influence. In case of severe obesity with a BMI of >34-38 kg/m2, weight reduction is the priority, if necessary by means of bariatric surgery. In longitudinal studies mortality (-29%), stroke (-34%), and myocardial infarction (-29%) could thus be reduced. Regular physical activity, whether endurance or more intense activity, leads to weight loss and improved vascular risk factors. An independent impact on stroke, myocardial infarction and mortality has not yet been demonstrated in prospective studies (double-blinding being impossible). Nevertheless, several epidemiological meta-analyses with observation durations of 4 to 28 years using data of up to 880 000 persons, indicate that there is a 2-3 fold risk reduction of cerebro-cardio-vascular death and global mortality in people with regular physical activity versus sedentary behaviour.

Key Words: nutrition, physical activity, cerebrovascular disease, stroke, myocardial infarction, mortality

Einführung

Unsere Risikofaktoren (Gewicht, Cholesterin, Blutzucker, Blutdruck) für einen Schlaganfall oder einen Herzinfarkt werden durch die Menge und die Zusammensetzung unserer Nahrung und durch unsere körperliche Aktivität maßgeblich beeinflusst [1-4]. Das Körpergewicht, die Körperzusammensetzung, aber auch spezifische Lebensmittel haben einen Einfluss auf Gefäßrisikofaktoren. Die höchste allgemeine Lebenserwartung und das niedrigste Schlaganfall- und Herzinfarktrisiko haben Personen mit einem Body-Maß-Index (Gewicht in kg geteilt durch die Körpergröße in m zum Quadrat) etwa zwischen 20 und 27,5 kg/m^2 [5]. Zur Prophylaxe eines Schlaganfalls oder Herzinfarktes kommt einer Vermeidung von Übergewicht deshalb eine hohe Bedeutung zu. Es gibt 3 Hauptursachen für Übergewicht: 1. Wir essen zuviel, 2. wir essen nicht das Richtige und 3. wir bewegen uns nicht genug. Dies liegt auch daran, dass wir evolutionär gesehen nicht an eine sitzende Tätigkeit im Büro mit übermäßigem Angebot an Nahrung, sondern an körperliche Arbeit im Freien angepasst sind. Eine Arbeit im International Journal of Obesity untersuchte die Größe der Mahlzeiten in bildlichen Darstellungen des Abendmahls im Verhältnis zur Kopfgröße der Jünger Jesu und fand eine Zunahme der Portionsgrößen über die Jahrhunderte [6]. Neben einem Einfluss auf das Gewicht haben die o.g. 3 Faktoren aber auch Einfluss auf die Körperzusammensetzung und Risikofaktoren wie Bluthochdruck, Diabetes und Cholesterin.

Neben dem bloßem Körpergewicht, das vorwiegend über das Gleichgewicht von Energiezufuhr (Essen/Trinken) und Energieverbrauch (Wärmebildung, körperliche Aktivität, zur Verstoffwechselung der Nahrung benötigte Energie) beeinflusst wird [7], spielt die Art der Nahrung eine große Rolle. Ein großes Problem in der Ernährungsmedizin ist, dass es vorwiegend Beobachtungsstudien und Kohortenstudien gibt und verhältnismäßig wenige prospektive interventionelle Studien. Dies macht es schwierig, einzelne Nahrungsmittel zu identifizieren, die gesund sind [8]. Eine dänische Studie untersuchte das Kaufverhalten anhand von 3,5 Millionen Transaktionen in Supermärkten und fand heraus, dass mit einem Kauf von Wein auch häufiger der Kauf von Oliven, Obst, Gemüse, Geflügel, fettarmem Käse, Milch und Fleisch verbunden war. Bierkäufer hingegen bevorzugten Fertiggerichte, Zucker, Chips, Schweinefleisch, Butter, Margarine, Wurst, Lamm und zuckerhaltige Getränke [9]. Damit wird klar dass womöglich der Effekt des „French Paradox“ nicht allein auf den regelmäßigen Weinkonsum zu reduzieren ist. Es gibt sogar Korrelationen zwischen dem Ernährungsstil, körperlicher Bewegung und dem Rauchen [10]. Aufgrund dieses Ernährungsstils können nur prospektive randomisierte Studien mit Austausch weniger Inhaltsstoffe/

Verhaltensmuster weiterhelfen. Hinzu kommt, dass häufig nur der Effekt auf Risikofaktoren wie z. B. Cholesterin untersucht wurde und nicht der Effekt auf das wirkliche Schlaganfall- und Herzinfarktrisiko oder die Sterblichkeit [11, 12]. Medikamente oder auch Nahrungsmittel haben häufig mehrere gegenläufige Wirkungen. So gingen z.B. eine deutliche medikamentöse Verbesserung der Verhältnisses von HDL- und LDL-Cholesterin sowie eine Verbesserung der Zuckerwerte mit dem Medikament Torcetrapib nicht mit einem verminderten Schlaganfall- und Herzinfarktrisiko einher, sondern dieses Medikament erhöhte sogar die Sterblichkeit um 58%, z. T. wahrscheinlich über eine Erhöhung des Blutdrucks [13, 14]. Die Notwendigkeit einer salzarmen Diät wird z. Zt. ebenfalls eher ablehnend gesehen, da sie zwar zu einer geringen Blutdrucksenkung führt, jedoch Cholesterin und Triglyceride sowie Stresshormone im Blut erhöht werden und es zu keiner Beeinflussung von Schlaganfall- und Herzinfarktrisiko sowie der Sterblichkeit kommmt [15, 16]. Ein weiteres großes Problem aktueller Studien zum Lebensstil ist, dass bei optimaler medikamentöser Einstellung der Risikofaktoren, v. a. mit Statinen und Antihypertensiva immer weniger Raum für einen Effekt durch Lebensstiländerungen verbleibt [17]. Wir wollen im Folgenden die Faktoren herausarbeiten, von denen wirklich durch aktuelle prospektive randomisierte Studien gezeigt wurde, dass sie eine Gewichtszunahme verhindern und das Risiko für Schlaganfall und Herzinfarkt vermindern und das Leben verlängern.

Gewicht, Gleichgewicht zwischen Gesamtenergiezufuhr und -verbrauch

Die Gesamtenergiezufuhr sollte natürlich dem Verbrauch angepasst sein; letzterer hängt von genetischen Faktoren, der Körpergröße und der körperlichen Aktivität ab. Es konnte bisher nicht in prospektiven randomisierten Studien gezeigt werden, dass durch eine Gewichtsreduktion mittels hypokalorischer Diät und Sport das Risiko für harte klinische Endpunkte gesenkt wird. In der Women's Health Initiative wurde die Hälfte von 48835 postmenopausalen Frauen intensiv bez. der Ernährung beraten [18]. Die Interventionsgruppe nahm durchschnittlich 114 kcal weniger täglich zu sich und reduzierte insbesondere die Aufnahme von Fett und nahm durchschnittlich etwa eine Portion Obst/Gemüse täglich mehr zu sich als die Kontrollgruppe. Nach 3 Jahren waren die Teilnehmerinnen der Interventionsgruppe 1,3 kg leichter, LDL- und HDL-Cholesterin hatten etwa im gleichen Verhältnis abgenommen und es ergab sich kein Unterschied bez. des Schlaganfall und Herzinfarktrisikos. Eine Metaanalyse randomisierter Studien ergab, dass eine mediterrane Diät zu einem höheren Gewichtsverlust, zu besseren Blutdruck-, Cholesterin-, Zucker- und Entzündungsparametern führt als eine fettarme Diät [19]. Ein Einfluss auf die Sterblichkeit, das Schlaganfall- oder Herzinfarktrisiko konnte nicht nachgewiesen werden [19]. Es gibt jedoch sehr gute Daten aus einer schwedischen Kohortenstudie, wo 2010 Patienten mit einer Magenoperation zur Gewichtsreduktion mit 2037 Kontrollpatienten

verglichen wurden. Durch einen etwa 16-23%igen Gewichtsverlust kam es bei diesen adipösen Patienten neben einer Verbesserung der Risikofaktoren zu einer 29%igen Reduktion der Sterblichkeit, zu einer 34%igen Reduktion des Schlaganfallrisikos und einer 29%igen Reduktion des Herzinfarktrisikos. Bei Frauen wurde zusätzlich auch das Risiko, an Krebs zu erkranken, um 42% erniedrigt [20]. Der Analogieschluss ist also wahrscheinlich erlaubt, dass bei deutlichem Übergewicht eine Gewichtsreduktion zu empfehlen ist. Die Grenze eines BMI von 25 zwischen Normal- und Übergewicht ist arbiträr, ein leicht erhöhter BMI ist bezüglich des Herzinfarkt-, Schlaganfall- und Sterblichkeitsrisikos nicht als krankhaft anzusehen [5]. Um abzunehmen oder um einer Wiederzunahme an Gewicht nach Beendigung der akuten Phase mit Diät und vermehrter körperlicher Aktivität vorzubeugen, haben sich in randomisierten Studien die folgenden Maßnahmen als sinnvoll erwiesen: ein eiweiß- und kohlehydratreiches Frühstück mit mehr Energiezufuhr als das Abendessen [21, 22], eine eiweißreiche Ernährung mit niedrigem glykämischem Index (Milchprodukte, Fleisch, Eier, Gemüse, Hülsenfrüchte, Sojaprodukte, Öle, Nüsse, Obst, und wenig Zucker, Weißbrot, Kartoffeln, Mais) [23], eine erhöhte Zunahme von Wasser [24, 25] und eine Fortführung der körperlichen Aktivität auch nach der akuten Phase [26]. Der glykämische Index gibt an, wie hoch und lange der Blutzuckerspiegel im Blut nach Aufnahme eines bestimmten Nahrungsmittels ansteigt, bei Zucker ist er zum Beispiel hoch und bei kohlenhydratarmen Nahrungsmitteln niedrig. Ob dieses Konzept richtig ist, ist unklar, da Nahrungsmittel mit einem niedrigen glykämischen Index auch aus anderen Gründen (z.B. Überschneidungen mit der mediterranen Diät, Faserreichtum, Eiweißreichtum) „gesund“ sein können. Eine eiweißreiche Ernährung hilft jedoch ohne Zweifel bei der Gewichtsreduktion und Erhaltung des Gewichtsverlustes [21, 23, 27, 28], unter anderem über ein vermehrtes Sättigungsgefühl und eine vermehrte Thermogenese und damit Erhöhung des Grundumsatzes [28-31]. Neben eiweißreicher Nahrung hat auch faserreiche Nahrung einen erhöhten Sättigungseffekt [32].

Spezifische Nahrungsmittel, die das Schlaganfall-, Herzinfarkt-risiko und Sterblichkeitsrisiko vermindern

Wir haben oben schon erwähnt, dass eine ***salz***arme Diät sich nicht auf das Risiko für einen Herzinfarkt, einen Schlaganfall oder auf das Risiko zu sterben auswirkt [33] und dass politische Bestrebungen, das Salz in Nahrungsmitteln zu reduzieren, zur Zeit kritisch gesehen werden müssen [15, 16].

Entgegen früherer Annahmen scheinen auch ***Omega-3 Fettsäuren*** keinen Effekt auf die Sterblichkeit und das Schlaganfall- und Herzinfarktrisiko zu haben, wenn Patienten nach den aktuellen Guidelines behandelt werden, insbesondere, wenn sie Statine einnehmen [17]. Der fehlende Einfluss auf harte Endpunkte wurde noch einmal durch eine große italienische Studie sowie Metaanalysen bestätigt [34-37].

Die Rolle des ***Fett***es in der Nahrung wird allgemein, v. a. auch in der

Lebensmittelwerbung überbewertet. Es ist jedoch nicht unbedingt so, dass alle Kalorien gleichwertig zu einer Zunahme des Körpergewichtes führen. In einer prospektiven randomisierten Studie wurden zwei isokalorische Diäten verglichen, die sich nur durch gesalzene Pistazien und gesalzene Brezel unterschieden. Der BMI verminderte sich stärker in der Gruppe, die gesalzene Pistazien erhalten hatte [38]. Nüsse, Pistazien und Erdnüsse (keine Nuss i. engeren Sinne, sondern eine Hülsenfrucht) sowie Olivenöl in geringen Mengen scheinen trotz des hohen Anteils an Fett weniger zu einer Gewichtszunahme zu führen, da sie zu einer langanhaltenden Sättigung führen, da die Energieaufnahme für den Körper erschwert ist und da sie zu einer vermehrten Thermogenese führen [39, 40]. Bis vor kurzem gab es keine prospektive randomisierte Studie, die zeigen konnte, dass sich durch Diät das zerebro-kardio-vaskuläre und das Sterblichkeitsrisiko vermindern lassen konnte [1]. Der kürzlich veröffentlichten PREDIMED-Studie (Primary prevention of cardiovascular disease with a mediterranean diet) an 7447 Patienten mit erhöhtem zerebro-kardio-vaskulärem Risiko kommt eine herausragende Bedeutung zu. In dieser Studie führte eine um 180kcal täglich höhere Energiezufuhr durch Fette in der Patientengruppe mit mediterraner Diät und Nüssen und eine um 141kcal täglich höhere Energiezufuhr durch Fette in der Patientengruppe mit mediterraner Diät und nativem Olivenöl nicht zu einer Gewichtszunahme im Vergleich zu einer Kontrollgruppe [41, 42]. Trotz der höheren Kalorienzufuhr kam es zu einer 47%igen Schlaganfallreduktion in der Patientengruppe mit mediterraner Diät und Nüssen und zu einer 31%igen Schlaganfallreduktion in der Patientengruppe mit mediterraner Diät und nativem Olivenöl [42]. Der Effekt der nussreichen Diät war stärker als der der olivenölreichen Diät. Das Herzinfarkt- und Sterblichkeitsrisiko wurde in dieser Studie nicht beeinflusst. Der Effekt auf das Schlaganfallrisiko liegt in der Größenordnung des Effektes einer Statinbehandlung [43, 44]. Dieser Studie ist auch deshalb wichtig, da im Gegensatz zu älteren Studien etwa 40% der Teilnehmer Statine und weit mehr als die Hälfte blutdrucksenkende Medikamente erhielt. Es ist interessant, im Detail zu sehen, was die Studienteilnehmer in den 3 Armen der Studie wirklich gegessen hatten, denn auch die Kontrollgruppe ernährte sich relativ „gesund“: Beide Gruppen mit mediterraner Ernährung und Nüssen nahmen mehr Nüsse (auch die Olivenölgruppe), mehr natives Olivenöl („extra vergine“, auch die Nussgruppe), Hülsenfrüchte und mehr Fisch zu sich. Im übrigen unterschieden sich die 3 Gruppen kaum (auch was Obst und Vollkornprodukte angeht). In dieser Studie wurde ein Nussgemisch aus 15g Walnüssen, 7,5g Mandeln und 7,5g Haselnüssen in der Nussgruppe empfohlen und auch erreicht. Ein Patient aus der Olivenölgruppe nahm täglich etwa 50g natives Olivenöl zu sich [42]. Die mediterrane Diät bestand aus frischem Obst ≥ 3 Mal pro Tag, Gemüse ≥ 2 Mal pro Tag, Fisch/Meeresfrüchte ≥ 3 Mal pro Woche, Hülsenfrüchte ≥ 3 Mal pro Woche, Sofrito (aus Tomaten, Zwiebeln, Knoblauch und Kräutern) ≥ 2 Mal pro Woche, weißem statt rotem Fleisch und optional ≥ 7 Mal pro Woche Wein mit

den Mahlzeiten [42]. Von Softdrinks, Gebäck, Süßigkeiten, Streichfett und rotem oder verarbeitetem Fleisch wurde abgeraten [42].

Körperliche Aktivität

Obwohl es evident erscheint, sich mehr zu bewegen, ist die Literaturlage hinsichtlich des Schlaganfall-, Herzinfarkt- und Sterblichkeitsrisikos in prospektiven Studien sehr dünn [2, 45, 46]. Prospektive Studien mit Bewegung sind schon durch die Unmöglichkeit von doppelblind Placebo-kontrollierten Versuchsserien gekennzeichnet. Des Weiteren beruht die Erfassung der körperlichen Aktivität in Beruf und Freizeit meistens auf Fragebogen oder Selbstauskünften.

Eine ältere, 2004 erschienene Metaanalyse von Koronarpatienten ergab eine Reduktion der Sterblichkeit, nicht aber des Herzinfarktrisikos durch eine Schulung, die auf körperlicher Betätigung basierte [4]. Eine Metaanalyse von 2013 ergab jedoch keinen Einfluss eines Schulungsprogramms bei Koronarpatienten auf die Morbidität und Mortalität [47]. Dies kann daran liegen, dass heutzutage die Risikofaktoren, v. a. Blutdruck und Cholesterin viel besser medikamentös behandelt werden. Körperliche Aktivität in einer randomisierten Studie bei 606 Typ II-Diabetespatienten führte zu einer Verbesserung des HbA1c, des BMI und des HDL-Cholesterins, nicht jedoch zu weniger harten klinischen Endpunkten [48]. In einer Metaanalyse von Patienten mit Bluthochdruck führte körperliche Aktivität zu einer Senkung des Blutdruckes, jedoch nicht zu einer Senkung von Schlaganfall-, Herzinfarkt- und Sterblichkeitsrisiko [49]. Ausdauer-, Widerstandstraining und eine Kombination beider sind in der Bekämpfung der Risikofaktoren ebenbürtig [26, 50]. Enttäuschend war ebenso die Look AHEAD-Studie, in der 5145 übergewichtige Patienten mit Typ II-Diabetes entweder intensiv oder standardmäßig bezüglich einer kalorienreduzierten Diät und körperlicher Aktivität (Ziel mäßige körperliche Aktivität ≥ 175 Minuten pro Woche) beraten wurden [51]. Es ergab sich nach einer medianen Beobachtungszeit von 9,6 Jahren kein Unterschied bezüglich Herzinfarkt, Schlaganfall oder Krankenhausaufenthalt wegen Angina pectoris. Dies lag möglicherweise daran, dass der Gewichtsverlust nur gering war (6.0% vs. 3.5% am Studienende) und daran, dass zwar auf die Menge der Kalorienzufuhr, nicht jedoch auf die Art der Ernährung Wert gelegt wurde. Körperliche Aktivität führt zu einem Gewichtsverlust, etwa in der Größenordnung von 1-3kg, und hilft dabei, diesen Gewichtsverlust aufrecht zu erhalten, wenn sie konsequent langfristig weitergeführt wird [26, 52].

Allerdings sind mehrere epidemiologische, retrospektive Metaanalysen mit großen (4 bis 20 Jahren) Observationsdauern und sehr großen Fallzahlen vorhanden [53-55]. In den allermeisten Publikationen sind sowohl zerebro-kardio-vaskuläre Mortalität als auch Gesamtsterblichkeit niedriger bei Personen mit guter kardio-respiratorischer Fitness gegenüber inaktiven Personen. Dieser Effekt fällt stärker aus wenn Selbsteinschätzungen oder Fragebogen den Fitnessgrad der

Probanden beschreiben als wenn objektivere Mittel (Laufband oder Ergometer Test) angewandt werden, die Resultate bleiben aber hoch signifikant positiv, sodass der Nutzen von regelmäßiger körperlicher Aktivität unumstritten ist [56].

Schlussfolgerung

Zusammenfassend ist es erwiesen, dass eine mediterrane Diät mit Nüssen und/ oder Olivenöl signifikant das Schlaganfallrisiko (um etwa 47% respektive 31%), nicht jedoch das Herzinfarktrisiko und Mortalitätsrisiko vermindert [41, 42]. Eine fettarme Diät [18], eine salzarme Diät [15, 16] und eine Supplementierung mit Omega-3-Fettsäuren [34-37] führen zu keiner Risikoreduktion. Bei Obesität mit einem BMI von >34-38 muss die Gewichtsreduktion im Vordergrund stehen, falls nötig mit Hilfe der bariatrischen Chirurgie. Dadurch kann sehr wahrscheinlich eine Verminderung der Sterblichkeit (-29%), des Herzinfarkt-(-29%) und des Schlaganfallrisikos (-34%) erreicht werden [20]. Regelmäßige körperliche Aktivität, sei es Ausdauer- oder Widerstandstraining, führt zu Gewichtsverlust und einer Verbesserung der Gefäß-Risikofaktoren [26, 50], ein eigenständiger Einfluss auf harte Endpunkte bei sonst guter Behandlung der Risikofaktoren steht jedoch in prospektiven Studien aus (wobei doppelblinde und Placebo-kontrollierte Studien sowieso nicht möglich sind).
Mehrere epidemiologische Studien und Meta-Analysen mit Observationsdauern von 4 bis 20 Jahren und Populationen bis zu 880 000 Personen errechneten eine 2-3 fache Risikoreduktion für kardiovaskuläre Mortalität und für Gesamtsterblichkeit für Personen mit regelmäßiger körperlicher Aktivität versus sedentärem Lebensstil [53-55].

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Case Report

Multidisciplinary management of a gastric metastasis of uveal melanoma presenting 12 years after enucleation

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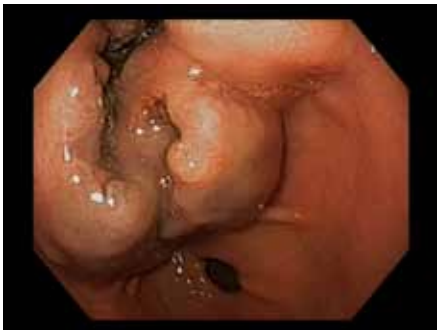
Introduction

Uveal melanoma (UM) is the most common malignant ocular cancer with almost 50% of patients ultimately developing distant metastasis[1]. The highest propensity areas to which uveal melanoma metastasizes are liver (95%), lung (24%), bone (16%) and skin (11%) [2] Despite the generally poor prognosis of patients with metastatic UM, an individualized strategy of care can prolong survival in selected patients. We hereby present a unique case of a young female patient with metastatic UM to the stomach 12 years after curative ocular resection who underwent a multidisciplinary approach associating a complete radiologic and endoscopic preoperative work-up, laparoscopic exploration and laparoscopic total gastrectomy with adequate lymphadenectomy and oncologic follow-up.

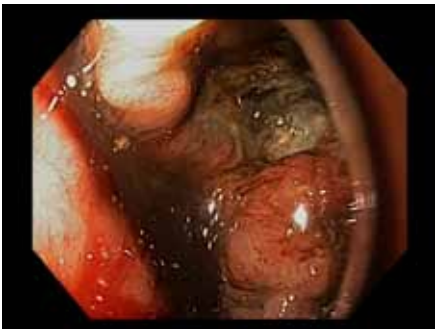
Case report

A 44 year-old female patient, with a personal history of a UM surgically resected by enucleation 12 years before, presented to our consultation suffering from chronic abdominal pain. She had a variety of associated symptoms including abdominal distension, without neither flatus nor weight loss, for a long lasting period of several months. The gnawing pain was located in the upper stomach area and often was relieved by eating.
The routine physical examination was unremarkable. Blood test identified a severe hypochromic microcytic anaemia (8.0 gr/dl Haemoglobin, MCV 70,5fL, MCH 20,2 pg, PLT 561000U/L), ferritin was low (2ng/ml), renal and hepatic function normal.

At the upper endoscopy, an exophytic tumour with central ulceration was identified at the anterior wall of the antrum. The central ulcer had an unusual dark coloration.



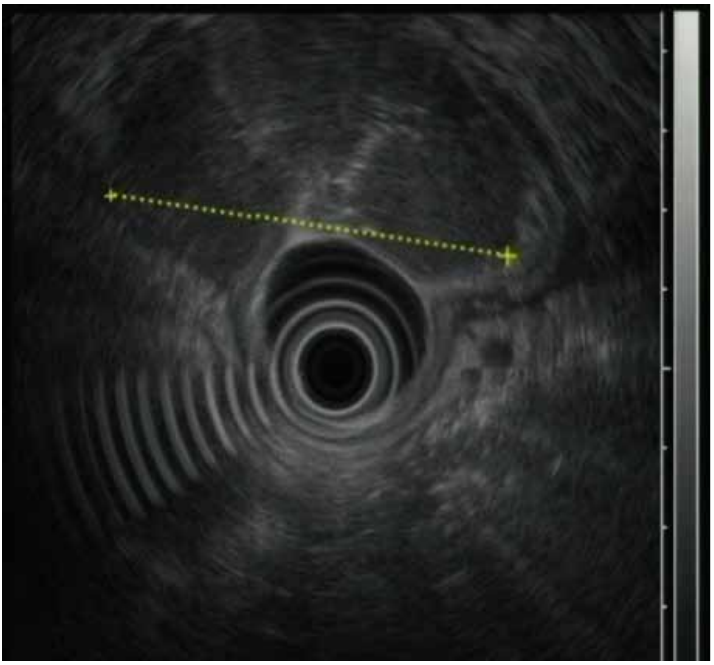
Endoscopy picture of a tumour blasted in its centre located in the anterior gastric wall



Endoscopy view within the cavity of the giant ulcer. The base of the ulcer has a brown-black color

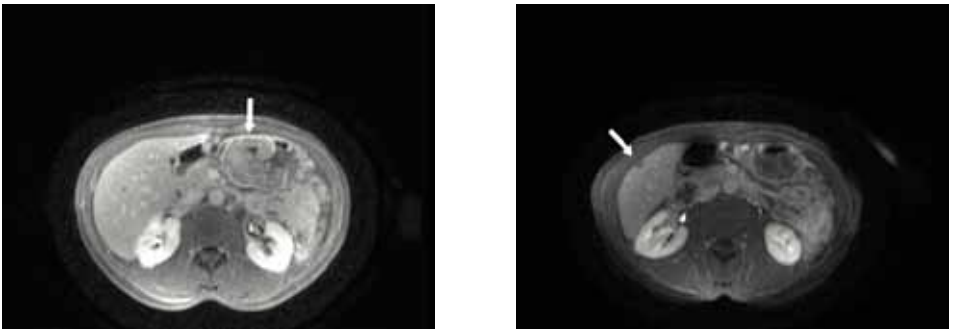
Biopsies were taken from the ulcer edge and center for histopathological examination. The histopathological finding was compatible with a metastatic melanoma. An epithelioid and fusiform cell line was established with basophilic cytoplasm and a big number of melanin cells containing pigment were present. Immunomarker study expressed melan-A, protein S100 and HMB45, Ki67 proliferation marker was found 30%.

On endoscopic ultrasound (EUS), the metastatic melanoma appeared as a hypoechoic irregular solid mass located in the gastric antrum, infiltrating the muscularis, of 3.8x5.5cm. Regional lymph node metastasis was suspected.



Endoscopy ultrasound image of the gastric metastasis

CT scan showed a thickened gastric wall with adjacent lymph nodes less than 1 cm size. Two focal hypodense hepatic lesions suggested us to get an MRI on suspicion of hepatic metastasis.
Gadolinium–enhanced dual arterial phase liver MRI technique (dynamic – 3D LAVA) revealed no enhancement of the two hepatic lesions. The portal venous phase was found to be slightly hyperintense compared to the surrounding liver, prompting us to suspect metastatic disease.

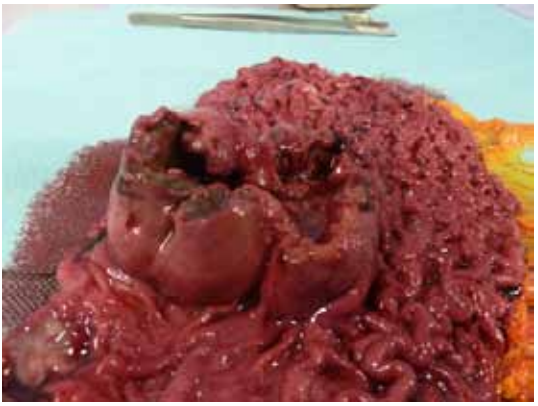


MRI 3D - Lava technique showing images of the metastatic melanoma located in the stonach with one of the infracentimetric hepatic lesions.

A positron emission tomography (PET) scan identified the hypermetabolism within the stomach area without other hyper metabolic areas. MRI excluded central nervous system or locoregional involvement and recurrence.

Our multidisciplinary tumor board promoted a surgical approach. The small lesions found on the liver were considered 'indeterminate' and they would not exclude the potentially resectable gastric tumour from surgery. In addition, our patient suffered from anaemia due to chronic blood loss. Future resection of liver lesions could be decided on progression.

Laparoscopic exploration allowed to exclude other metastatic implant and laparoscopic total gastrectomy with D2 lymph node dissection was done.



Surgical specimen

The postoperative course was uneventfull without requiring intensive care unit stay.

Oral fluid diet started at the 2nd postoperative day. Gastrografin study, performed at day 4 confirmed the absence of anastomotic leaks. Epidural analgesia was removed at day 5 and the patient was discharged at day 8.

The anatomopathological results confirmed a malignant melanoma of large size (9x7cm) located at the anterior antral wall. One out of 44 lymph nodes was tumour involved. The distance between tumour and the nearest surgical margin was 3 cm and at analysis, all layers of the gastric wall were infiltrated. We underwent BRAF mutation testing detection and on analysis no BRAF V600 mutation was found. GNAQ gene was found to be mutated, gene known to be mutated frequently in UM.[4]

The follow up over 18 months shows no recurrence. The two small hepatic lesions remained unchanged throughout follow-up by contrast-enhanced real-time low-mechanical-index sonography. Full-body MRI scan didn't detect hidden metastasis.

Discussion

Multidisiplinary approach to UM could allow a five-year survival rate of almost 60%, by incorporating several new strategies such as proton beam radiotherapy, curietherapy and photocoagulation. Late recurrence of uveal melanoma is not uncommon, with most detected during the screening period as late local recurrence and liver metastasis. The signals that initiate and maintain dormancy of melanoma are poorly understood. Equally unknown are the signals that propel expansion of tumour cells after a period of dormancy.[3] The clinical, biological and genetic characteristics differ between uveal and cutaneous melanoma. Frequent genetic abnormalities are monosomy 3, mutation of GNAQ and DDEF1 genes as compared to cutaneous melanoma, characterized by mutations of BRAF and NRAS.[4]

Metastatic uveal melanoma has a poor prognosis with median survival time after diagnosis of metastasis being 3.6 months[5]. Distal metastases are classically located in the liver and lungs; metastasis to the gastrointestinal tract presents a rare entity (5%)[6]. Case series exist and are published of patients receiving different therapies, even aggressive surgical ones, offering a better prognosis and hope to selected patients with metastatic melanoma.

To our knowledge this is the only case report of a UM presenting as unique gastric late metastasis after curative resection. Our literature review found case reports of metastatic melanomas to the gastrointestinal tract but none presenting as a unique one to the stomach.

Another undocumented feature of this case report is the use of minimally invasive technique to resect laparoscopically a gastric metastatic melanoma. The laparoscopic gastrectomy for gastric cancer is accepted in the context of clinical trials and is becoming nowadays a standard of care in expert surgical teams, offering the same long-term oncological and functional outcomes as open radical gastrectomy.[7,8] The laparoscopic approach confirms the classical benefit in terms of an earlier recovery, less pain, and reduced impairment of pulmonary function.[9] The locally advanced metastatic melanoma of our patient seemed possible to a laparoscopic approach in respect of common oncological standards. The reflection of the surgical quality is the resection margin, the number of resected lymph nodes (D2 resection), the excellent long-term functional outcome of the patient and of course the absence of disease progression after 18 months of continuous follow-up.

Our multidisciplinary oncology team reviewed the utility for adjuvant chemo-therapeutic treatment. The added benefit of adjuvant therapy in this rare clinical manifestation of metastatic melanoma is not proven and therapy wouldn't come without a price. Surveillance for early recurrence and evolution of hepatic lesions was chosen.

Conclusion

Clinicians of different specialities treating patients with history of a UM are recommended to remain alert for the possibility facing a distant late metastasis. Symptoms reported by patients may be unusual metastatic presentations.
Patients benefit from a multidisciplinary oncologic approach focused on an individualised plan of diagnostic evaluation and treatment. Different specialities come together and exchange ideas and experiences offering a treatment plan, something particularly useful for patients manifesting rare malignant diseases. Novel therapeutic techniques can be incorporated according to the best of our professional judgement, after careful examination of each case.

It is important to realize that this is a unique case report, focusing on a rare manifestation of UM and scientific evidence lacks to extrapolate these results on a larger scale. Clinicians should face such patients on an independent basis and decisions in cancer multi-disciplinary teams as in order to obtain a therapeutic strategy balanced between the risk and the benefit of our interventions.

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> **1.** Lahita R, Kluger J, Drayer DE, Koffler D, Reidenberg MM. Antibodies to nuclear antigens in patients treated with procainamide or acetylprocainamide. N Engl J Med 1979;301:1382-5.

Figures should be professionally designed. Glossy photographs or electronic submissions are requested. The back of each figure should include the sequence number, the name of the author, and the proper orientation (e.g., "top"). Do not mount the figure on cardboard. Color photographs are printed on demand and

exclusively at the authors cost. If not otherwise specified, color photographs will be reduced to greyscale. If photographs of patients are used, either the subjects should not be identifiable or their pictures must be accompanied by written permission to use the figure.

For drugs, generic names should generally be used. Materials taken from other sources must be accompanied by a written statement from both author and publisher giving permission to the Bulletin for reproduction.

Manuscripts are examined by the editorial staff and are usually sent to outside reviewers.

Conférence-débat

La résistance aux antibiotiques : la recherche de solutions locales pour un défi global

Médecins Sans Frontières et le CRP Santé ont le plaisir de vous inviter à une conférence sur la résistance aux antibiotiques, le **mercredi 11 décembre au CHL**.
La conférence commence **à partir de 17h** et se termine à 19h avec un verre d'amitié.
Avec la participation du Laboratoire National de Santé et de l'Organisation mondiale de la Santé

Pourquoi la résistance aux antibiotiques ?

Dans un environnement biomédical qui ne connaît plus de frontières, l'antibiorésistance est devenue un défi pour la santé publique globale. Les conséquences d'un tel phénomène se font ressentir au niveau global et au niveau local. La situation est particulièrement préoccupante pour les pays à faible et moyen revenu. Aux faibles ressources financières viennent s'ajouter une mauvaise utilisation des médicaments, et souvent une quasi absence de données sur la situation locale de l'antibiorésistance. Cela rend particulièrement difficile l'élaboration de stratégies d'antibiothérapie.

La conférence se tiendra en anglais.

PROGRAMME

17h Introduction by **Dr Jean-Claude Schmit, *CRP Santé***
17h15 MSF and antibiotic resistance, **Dr Rony Zachariah, *MSF LuxOR***
17h30 Irrational use of drugs in a pediatric hospital in Sierra Leone, **Marjolein de Bruycker, *MSF***
17h45 Prevalence of antibiotic resistance in middle and low income countries - the experience in Afghanistan, **Olivier Courteille, *MSF***
18h MRSA in long-term care facilities in Luxembourg: findings from classical epidemiology and whole genome sequencing, **Dr. Joël Mossong, *National Laboratory for Health***
18h15 Questions and answer
18h30 Discussion
Moderator: Dr Robert Hemmer

Panel: Olivier Courteille, Dr Rony Zachariah, Dr Jean Claude Schmit, Marjolein de Bruycker, Dr Guy Berchem, Dr John Stelling (WHO Collaborating Centre for Surveillance of Antimicrobial Resistance)
19h Drinks and snacks
Pour plus d'information visitez notre site www.msf.lu ou contactez laura.bianchi@luxembourg.msf.org