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The fraction of cancer attributable to modifiable risk factors in England, Wales, Scotland, Northern Ireland, and the United Kingdom in 2015

Brown KF et al (2018) Br J Cancer [1]

Background: Changing population-level exposure to modifiable risk factors is a key driver of changing cancer incidence. Understanding these changes is therefore vital when prioritising risk-reduction policies, in order to have the biggest impact on reducing cancer incidence. UK figures on the number of risk factor-attributable cancers are updated here to reflect changing behaviour as assessed in representative national surveys, and new epidemiological evidence. Figures are also presented by UK constituent country because prevalence of risk factor exposure varies between them.

Methods: Population attributable fractions (PAFs) were calculated for combinations of risk factor and cancer type with sufficient/convincing evidence of a causal association. Relative risks (RRs) were drawn from meta-analyses of cohort studies where possible. Prevalence of exposure

to risk factors was obtained from nationally representative population surveys. Cancer incidence data for 2015 were sourced from national data releases and, where needed, personal communications. PAF calculations were stratified by age, sex and risk factor exposure level and then combined to create summary PAFs by cancer type, sex and country.

Results: Nearly four in ten (37.7%) cancer cases in 2015 in the UK were attributable to known risk factors. The proportion was around two percentage points higher in UK males (38.6%) than in UK females (36.8%). Comparing UK countries, the attributable proportion was highest in Scotland (41.5% for persons) and lowest in England (37.3% for persons). Tobacco smoking contributed by far the largest proportion of attributable cancer cases, followed by overweight/obesity, accounting for 15.1% and 6.3%, respectively, of all cases in the UK in 2015. For 10 cancer types, including two of the five most common cancer types in the UK (lung cancer and melanoma skin cancer), more than 70% of UK cancer cases were attributable to known risk factors.

Conclusion: Tobacco and overweight/obesity remain the top contributors of attributable cancer cases. Tobacco smoking has the highest PAF because it greatly increases cancer risk and has a large number of cancer types associated with it. Overweight/obesity has the second-highest PAF because it affects a high proportion of the UK population and is also linked with many cancer types. Public health policy may seek to mitigate the level of harm associated with exposure or reduce exposure levels-both approaches may effectively impact cancer incidence. Differences in PAFs between countries and sexes are primarily due to varying prevalence of exposure to risk factors and varying proportions of specific cancer types. This variation in turn is affected by socio-demographic differences which drive differences in exposure to theoretically avoidable 'lifestyle' factors. PAFs at UK country level have not been available previously and they should be used by policymakers in devolved nations. PAFs are estimates based on the best available data, limitations in those data would generally bias toward underestimation of PAFs. Regular collection of risk factor exposure prevalence data which corresponds with epidemiological evidence is vital for analyses like this and should remain a priority for the UK Government and devolved Administrations.

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Commentaire : *Le message de cette étude de population est sans appel, le surpoids et l'obésité sont au Royaume-Uni la deuxième cause de cancer évitable après le tabagisme. Cet effet apparaissait plus marqué chez les femmes que chez les hommes (pourcentage de risque attribuable : 7,5 % : femmes versus 5,2 % : hommes). Cette étude complète l'étude épidémiologique américaine publiée récemment dans Annals Of Surgery [2]. Dans cette étude couvrant la décennie (2004-2014) et concernant 22 198 patients, l'obésité apparaissait comme facteur de risque de 13 types de cancer et particulièrement les cancers mammaires, de l'endomètre, colorectaux et pancréatiques. Ainsi en 2014, 40 % des cancers étaient liés à l'obésité. La chirurgie bariatrique permettait de diminuer d'un tiers le risque de développer un cancer.*

Relationship between intraoperative non-technical performance and technical events in bariatric surgery.

Fecso AB et al. (2018) Br J Surg. [3]

Background: The operating theatre is a unique environment with complex team interactions, where technical and non-technical performance affect patient outcomes. The correlation between technical and non-technical performance, however, remains underinvestigated. The purpose of this study was to explore these interactions in the operating theatre.

Methods: A prospective single-centre observational study was conducted at a tertiary academic medical centre. One surgeon and three fellows participated as main operators. All patients who underwent a laparoscopic Roux-en-Y gastric bypass and had the procedures captured using the Operating Room Black Box® platform were included. Technical assessment was performed using the Objective Structured Assessment of Technical Skills and Generic Error Rating Tool instruments. For non-technical assessment, the Non-Technical Skills for Surgeons (NOTSS) and Scrub Practitioners' List of Intraoperative Non-Technical Skills (SPLINTS) tools were used. Spearman rank-order correlation and N-gram statistics were conducted.

Results: Fifty-six patients were included in the study and 90 procedural steps (gastrojejunostomy and jejunojunostomy) were analysed. There was a moderate to strong correlation between technical adverse events ($rs=0.417-0.687$), rectifications ($rs=0.380-0.768$) and non-technical performance of the surgical and nursing teams (NOTSS and SPLINTS). N-gram statistics showed that after technical errors, events and prior rectifications, the staff surgeon and the scrub nurse exhibited the most positive non-technical behaviours, irrespective of operator (staff surgeon or fellow).

Conclusion: This study demonstrated that technical and non-technical performances are related, on both an individual and a team level. Valuable data can be obtained around intraoperative errors, events and rectifications.

Commentaire : *Le succès chirurgical résulte de la combinaison de plusieurs facteurs : humains, l'organisation au sein du bloc opératoire, la communication, la fatigue, etc. [4,5]. Cette étude s'intéresse au lien entre les événements non désirables techniques et la performance non technique du personnel médical et paramédical dans le bloc opératoire. Cette étude prospective, réalisée au sein d'un centre tertiaire auprès d'un chirurgien sénior et 3 fellows a porté sur l'étude de 56 procédures de RYGB. Pendant toute la procédure, le bloc opératoire a été filmé et un enregistrement sonore a été réalisé. Puis l'ensemble de ces éléments ont été revus par 4 observateurs et notés à l'aide d'échelles définies étudiant plusieurs paramètres dont le comportement, la réponse adaptée à une erreur technique, la communication au sein du bloc. Cette étude met en évidence une corrélation forte entre les complications peropératoires et l'environnement opératoire. L'expérience de l'industrie suggère qu'il peut être possible d'améliorer la capacité des chirurgiens à gérer leur propre prise de conscience de la situation, à travers la formation, les briefings peropératoires et la gestion de la charge de travail peropératoire. À l'avenir, il sera peut-être possible d'utiliser la performance non technique comme mesure de substitution pour la performance technique.*

Morbidity of cholecystectomy and gastric bypass in a national database

Wanjura V et al. (2018) Br J Surg. [6]

Background: There is a strong association between obesity and gallstones. However, there is no clear evidence regarding the optimal order of Roux-en-Y gastric bypass (RYGB) and cholecystectomy when both procedures are clinically indicated.

Methods: Based on cross-matched data from the Swedish Register for Cholecystectomy and Endoscopic Retrograde Cholangiopancreatography (GallRiks; 79 386 patients) and the Scandinavian Obesity Surgery Registry (SOReg; 36 098 patients) from 2007 to 2013, complication rates, reoperation rates and operation times related to the timing of RYGB and cholecystectomy were explored.

Results: There was a higher aggregate complication risk when cholecystectomy was performed after RYGB rather than before (odds ratio (OR) 1.35, 95% c.i. 1.09 to 1.68; $P=0.006$). A complication after the first procedure independently increased the complication risk of the following procedure (OR 2.02, 1.44 to 2.85; $P<0.001$). Furthermore, there

was an increased complication risk when cholecystectomy was performed at the same time as RYGB (OR 1.72, 1.14 to 2.60; $P=0.010$). Simultaneous cholecystectomy added 61.7 (95% c.i. 56.1 to 67.4) min ($P<0.001$) to the duration of surgery.

Conclusion: Cholecystectomy should be performed before, not during or after, RYGB.

Commentaire: *Cette étude suédoise à partir de la base Scandinavian Obesity Surgery et de la base Swedisch Register for Cholecystectomy and Endoscopic Retrograde Cholangiopancreatography (GallRiks) pose la question débattue : à quel moment doit-on réaliser une cholécystectomie chez les patients opérés d'un RYGB. En effet, les études mettent en évidence une augmentation du risque de complication postopératoire lorsque le geste est réalisé en même temps [7,8]. Mais peu d'études ont comparé les complications suivant que la cholécystectomie ait été réalisée avant, pendant et après la réalisation d'un gastrique bypass. Cette étude, portant sur 982 patients (cholécystectomie avant le RYGB), 1133 patients (cholécystectomie après RYGB) et 152 patients (cholécystectomie + RYGB dans le même temps), met en évidence une augmentation du risque de complication postopératoire (à 30 jours) si la cholécystectomie était réalisée après (25,2 %) la réalisation du RYGB versus avant le geste opératoire (19,4 %). La réalisation des 2 gestes lors de la même intervention augmente la durée de l'intervention (+70 min). Le biais de cette étude est que les patients opérés en préopératoire ont le plus souvent une symptomatologie biliaire moins sévère en préopératoire qu'en postopératoire, ce qui explique probablement ces résultats. En conclusion, les auteurs recommandent qu'une cholécystectomie soit réalisée en préopératoire du bypass en cas de lithiase vésiculaire.*

Risk Prediction Model for Severe Postoperative Complication in Bariatric Surgery

Stenberg E, et al (2018) *Obes surg* [9]

Background: Factors associated with risk for adverse outcome are important considerations in the preoperative assessment of patients for bariatric surgery. As yet, prediction models based on preoperative risk factors have not been able to predict adverse outcome sufficiently.

Objective: This study aimed to identify preoperative risk factors and to construct a risk prediction model based on these.

Methods: Patients who underwent a bariatric surgical procedure in Sweden between 2010 and 2014 were identified from the Scandinavian Obesity Surgery Registry (SOReg). Associations between preoperative potential risk factors and severe postoperative complications were analysed using a

logistic regression model. A multivariate model for risk prediction was created and validated in the SOReg for patients who underwent bariatric surgery in Sweden, 2015.

Results: Revision surgery (standardized OR 1.19, 95% confidence interval (CI) 1.14-0.24, $p<0.001$), age (standardized OR 1.10, 95%CI 1.03-1.17, $p=0.007$), low body mass index (standardized OR 0.89, 95%CI 0.82-0.98, $p=0.012$), operation year (standardized OR 0.91, 95%CI 0.85-0.97, $p=0.003$), waist circumference (standardized OR 1.09, 95%CI 1.00-1.19, $p=0.059$), and dyspepsia/GERD (standardized OR 1.08, 95%CI 1.02-1.15, $p=0.007$) were all associated with risk for severe postoperative complication and were included in the risk prediction model. Despite high specificity, the sensitivity of the model was low.

Conclusion: Revision surgery, high age, low BMI, large waist circumference, and dyspepsia/GERD were associated with an increased risk for severe postoperative complication. The prediction model based on these factors, however, had a sensitivity that was too low to predict risk in the individual patient case.

Commentaire: *La force de cette étude de registre réside comme toujours dans le nombre de patients inclus (37811 patients) et confirme de manière plus nette les données publiées précédemment [10,11] et notamment sur l'impact négatif des chirurgies de reprise [12,13]. En dépit d'un effectif inférieur à celle de Nguyen et al [11] cette étude présente l'avantage d'être proche de nos pratiques en étudiant les interventions les plus couramment réalisées (sleeve et bypass en Y) sur une période récente (2010-2014).*

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