POSTERS

Are Complication Rates of Breast Reduction Similar in Former Smokers and Never Smokers?

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INTRODUCTION: It has been reported that cigarette smoking affects wound healing and increases the complication rate in breast surgery. However, it is not clear if preoperative abstinence from smoking for a period of time corrects the problem.

METHODS: A prospective cohort study was performed to evaluate postoperative complications after reduction mammoplasty in former smokers and never smokers. All women who presented to the Plastic Surgery Clinic for a reduction mammoplasty were invited to participate in the study. A period of 4 weeks of preoperative and 4 weeks of postoperative abstinence from smoking was requested for all participants who were smokers. Only women who were successful at discontinuing smoking for the requested period of time and had a negative preoperative urine test for nicotine metabolites were offered surgery. No nicotine replacement therapy was used during the perioperative period. Data collection included demographic questions as well as preoperative smoking history, whether the patient was diabetic, body mass index, breast specimen weight, and postoperative complications. The difference between the groups (former smokers versus never smokers) was evaluated using Student t-test or chi-square, whichever was appropriate, with a P value of less than 0.05 being considered significant. This study was approved by the Institutional Review Board.

RESULTS: The study evaluated 298 women who had reduction mammoplasty. Of the group 60 (20%) were former smokers and 238 (80%) were never smokers. Among former smokers, mean intensity was 11 ± 3 cigarettes/day, and mean duration was 10 ± 4 years. The groups were not significantly different in age (31 ± 12 versus 30 ± 11), body mass index (32 ± 3 versus 33 ± 3), frequency of diabetes (5% versus 4%), and weight of breast tissue resection (928 ± 119 versus 931 ± 127). The study found a significantly (P < 0.05) higher frequency of postoperative complications in former smokers. The complications that were found to occur more frequently in former smokers included surgical site infection (12% versus 3%), wound dehiscence (13% versus 3%), fat necrosis (12% versus 2%), nipple necrosis (15% versus 2%), and the need for re-operation/revision (10% versus 1%).

CONCLUSIONS: Our findings indicate that former smokers have a higher complication rates in spite of following the recommended period of abstinence from smoking of 4 weeks before and after surgery. This should not prevent the patient from having the surgery, but they should be informed that wound complications may occur.

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Urinary Microalbuminuria and Malondialdehyde as Early Predictors of Acute Renal Failure in Adult Thermal Burn Patients

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BACKGROUND: Thermal burns are one of the most deliberate of all disasters. It is not only a skin injury but also a multiple systemic illness and often accompanied by various complications. Acute renal failure (ARF) is one of the major complications of burns, carrying an extremely high mortality. Several studies have reported the incidence of ARF in burned patients may reach up to 30% with a high mortality rate of 73%–100%. Despite improved management and the availabilities of dialytic support, mortality rates in burned patients with ARF have remained above 80%.
Aim: In this study, we tried to investigate some of the early markers that will eventually could predict of ARF in major thermal burns.

PATIENTS AND METHODS: This was a prospective study on 100 adult patients who suffered from deep second and third degree thermal burn with >20% of total body surface area and admitted to the burn unit at Mansoura University Hospital-Egypt between 2018 and 2020. Children, electrical burn, patient with previous renal dysfunction, and delayed burn cases had been excluded from this study. We resuscitated all patients according to Parkland’s formula to maintain a urine output of 1 ml/kg/hour. Routine investigation as arterial blood gases /12 hours, complete blood count, liver function tests, urine analysis every 5 days. Blood culture, coagulation profile, chest X-rays were done every week. Serum creatinine, blood urea nitrogen, fractional excretion of sodium, urinary malondialdehyde (MDA) and microalbuminuria, completed on days 0, 3, 7, 14, and 21. Age, sex, TBSA, and Apache II score were recorded. We categorized the patient into two groups: (Group I) as patients who developed ARF and (Group II) as patient did not develop ARF.

RESULTS: Twenty-three patients of our cohort (23%) demonstrated acute renal failure, and 8 patients underwent dialysis. Group I showed an increase in the glomerular damage marker as urinary microalbuminuria at day 0 to reach a three-fold peak on day 14 that was constant with elevated serum creatinine. Urinary malondialdehyde was also increased in Group I and reached 3-fold of their normal values on day 14. We reported this with rising microalbuminuria followed by its decrease after controlling of septicemia. Five cases (21.7%) of Group I cohort developed multisystem organ failure and subjected to low blood pressure dialysis.

Univariate and multivariate analysis showed that besides total body surface area and multisystem organ failure associated septicemia were significantly correlated with development of ARF ($P < 0.0015, P < 0.0023$) respectively using multiple regression analysis.

CONCLUSIONS: The incidence of early acute renal failure was 23% in our study. It was mainly related to the high total body surface area and burn depth and development of multisystem organ failure associated septicemia. Urinary Microalbuminuria and Malondialdehyde level during early renal impartment were very crucial in predicting renal affection on the glomerular and tubular level in thermal burn patients.