

# Frequency of Keloid and Hypertrophic Scar in Post-cardiac Surgery Wounds

Sir

There are 200 cardiac operations done in our setup on monthly basis. Sternal wound complications make up about 1% of our post-cardiac surgery complications, which include superficial and deep surgical wound infection (mediastinitis and wound dehiscence). Superficial (1.1 - 6.7%) and deep wound infections (0.1 - 3.7%) are treated with dressing, debridement/re-wiring, and antibiotics.<sup>1</sup> Scar formation begins after the remodelling phase of wound healing. An aberrant scar formation is the most common sternal wound healing problem observed in our post-operative cardiac surgery clinics. The abnormally grown sternal scars are the only reason some patients keep visiting the post-operative clinics to get rid of them. It becomes long-term morbidity for our patients. Since the literature in cardiac surgery lacks adequate data on its prevalence so research was conducted to find out its prevalence in our post-median sternotomy wound patients.

We collected data from 300 patients to find out the frequency of keloid and hypertrophic scars in postoperative cardiac surgery patients. All coronary artery bypass grafting, valvular and aortic root replacements done *via* median sternotomy were included. There were 180 males and 120 females with ages ranging from 28 years to 66 years. People from 3 different ethnicities were taken: Sindhi, Urdu-speaking, and Pathans. All these patients had a full sternotomy extending from the jugular notch to the xiphoid process.

The frequency of hypertrophic scar came out to be 65%, keloid 10%, and normal mature scar as 25% in our post-operative cardiac surgery patients. The keloid was reported more in females as compared to males. No association of hypertrophic scar with gender was found. There was no significant difference among the three ethnic groups in the type of scar.

Scars have psychological effects. Many women have been found who developed anxiety and depression due to their scars. A study conducted on keloids reported that 53.3% of individuals had pain, 93% pruritis at the site of keloids, impaired quality of life in a large number of patients, and a psychological impact of 65.8%.<sup>2</sup>

There are many treatment options for hypertrophic scars and keloids. The GREMCIQ (Group for Multicenter Studies in Keloids and Hypertrophic Scars) has regarded Silicone gel sheeting as one of the widely used methods for the prevention of hypertrophic scars and keloids. It is recommended to be used soon after the suture removal when the scar is in the immature phase.<sup>3,4</sup>

Prevention has always been better than cure. The patients who received topical silicone gel sheeting within 48 hours after surgery had a significantly lower occurrence of an abnormal scar than the control group (39% versus 71%).<sup>5,6</sup> Currently, in cardiac surgery setups in Pakistan, none of these preventive strategies are applied as the scar is given the least importance. The purpose of this research was to bring in notice the high prevalence of aberrant scars in post-cardiac patients and to apply the widely-known strategies to reduce this morbidity in our patients.

## COMPETING INTEREST:

The authors declared no competing interest.

## AUTHORS' CONTRIBUTION:

WS: Substantial contribution to the concept, design of work, and collection of data.

FI: Analysis and interpretation of data.

FS: Drafting of manuscript.

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