

Scars, The Surgeons' Overlooked Threat From Hero to Zero

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Abstract: Scar is a reminding mark left by surgeons on patients who presented with wounds or required surgery. In healing process, due to some circumstances and individual traits, wounds could become bad scars that would definitely affect the patient's appearance and cause many complaints. In the first years after treatment, surgeons will be commemorated as heroes who once helped the patients to overcome and cure the disease. After a few years, the memory of the surgeon's heroic action will gradually dissipate with the formation of a bad scar. Such good memory will be replaced with persistent complaints arising from the scar such as deformity, pain, itchiness and enlargement of the lesion. Several efforts have been made to manage disturbing scars however they often do not yield satisfactory result and moreover sometimes the scars will enlarge, become unpleasant and more disturbing. This will frustrate the patient as well as the surgeon. The good memory of the surgeon as a hero has shifted into one whose surgical procedure was regretted. Presently, there are about 25 modalities using various approaches for scar treatment. These manifold choices indicate that the available modalities have been generally inadequate and the therapeutic response very variable. Furthermore, treatment selection is also based on recurrence. Most of the available therapeutic modalities in this stage are nonsurgical. There is also topical treatment mostly containing herbal extract, which is considered inadequate and lacking of evidence base. Corticosteroid injection and silicone gel is a nonsurgical method recommended and supported by evidence based. This technique is largely chosen by doctors. Combined therapy is the method of choice believed to yield optimal result. Let us remain heroes by paying attention to scars.

Keywords: Scar, keloid, management, silicon gel, evidence based, combination therapy

Abstrak: Parut adalah tanda kenangan ahli bedah pada pasiennya yang datang dengan luka atau bekas luka yang memerlukan tindakan dalam penanganannya. Dalam proses penyembuhan luka, baik karena kondisi tertentu ataupun bakat dari seseorang, luka dapat menjadi parut yang jelek yang mengganggu penampilan dan juga menimbulkan berbagai keluhan. Pada tahun-tahun pertama pascapenanganan kasus, spesialis bedah akan dikenang sebagai pahlawan yang telah menolong mengatasi penyakit yang terjadi. Namun, pada beberapa tahun berikutnya kenangan aksi heroik ahli bedah berangsur-angsur surut, dengan adanya parut yang jelek. Kenangan yang baik tersebut berubah digantikan dengan keluhan parut yang dirasa terus menerus, menimbulkan gangguan seperti: gangguan penampilan, nyeri, gatal dan ukuran lesi yang membesar. Berbagai upaya telah dilakukan untuk mengatasi parut yang mengganggu, namun seringkali tidak memberikan hasil yang memuaskan bahkan terkadang parut menjadi lebih besar, lebih jelek dan lebih mengganggu. Hal ini membuat frustrasi bagi pasien yang mengalami dan juga bagi dokter bedahnya. Kenangan telah berganti dari pahlawan menjadi sosok yang disesali tindakannya. Saat ini untuk penanganan parut diketahui ada sekitar 25 modalitas dengan berbagai pendekatan. Pilihan yang banyak seperti ini menunjukkan bahwa modalitas yang ada belum sepenuhnya dapat memuaskan. Secara umum, respon terapi sangat bervariasi. Disamping itu faktor rekurensi juga menjadi pertimbangan dalam memilih terapi. Modalitas terapi yang ada pada stadium ini sebagian besar adalah modalitas nonbedah. Ada juga pilihan terapi topikal yang sebagian besar berisi obat ekstrak herbal, namun tidak didukung evidence based yang cukup. Saat ini injeksi kortikosteroid dan jel silikon adalah metoda nonbedah yang direkomendasi dan didukung evidence based yang memadai. Teknik ini banyak dipilih oleh para dokter. Kombinasi terapi juga merupakan pilihan terbaik, yang dipercaya dapat memberikan hasil yang optimal. Tetaplah menjadi pahlawan, dengan memberi perhatian pada parut.

Kata Kunci: Scar, keloid, management, silicon gel, evidence based, combination therapy

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Scar is a reminding mark left by surgeons on patients who presented with wounds or needed surgery (creating wound). Simply, scar is a mark after a wound. Most surgical approaches commence through the outer layer of the skin. Scar is a natural deformity, which may form due to the process of wound healing that is deeper than dermis. There is a changing structure of the skin that includes the lost of pores, hair and glands that are followed by color change hypopigmentation or hyperpigmentation. In healing process, some scars, in certain circumstances or due to individual traits, could become bad scars that will definitely affect the patients' appearance and will cause many complaints.

Years after treatment, surgeons will be commemorated as heroes who once helped patients to overcome and cure their sickness or diseases, such as appendectomy for curing the perforated appendicitis, laparotomy in treating peritonitis, open heart surgery or caesarean section for fetal distress. As a matter of fact, surgeons have helped patients in saving their lives by emergency surgical procedures and also elective procedures. After a few years of waiting and pain, the memory of the heroic action by the surgeons gradually fades with the presence of bad scar. The good memory will be replaced because of a worse mark left by surgeons. Complaints arising from the bad scar are disfigurement, pain, itchiness, redness, stiffness and enlargement of the lesion. Many efforts have been put into the treatment of scars including corticosteroid injection, various creams and gel, surgical revision and many other modalities. These treatments often do not give better results and sometimes even can cause enlargement of the scars, uglier and unpleasant to the patients. These will frustrate the patient and surgeon who encounters an impasse in selecting treatment for scar. This will become a nightmare for them. The good memory of the surgeon as hero has changed into one whose surgical procedure was regretted. Subsequently, those who see the scar will make assumptions such as; did the surgeon work delicately enough to prevent or eliminate the scar? Would it be possible to develop such

a scar had the surgeon used a low quality surgical string? Was the surgery carried out at night so that the surgeon was in a rush and therefore produced a bad result? Did the surgeon instruct his junior to do the surgery? Basically, these assumptions arise due to the presence of the unpleasant scar on skin, the mark by the surgeon on his patient.

From the surgeon's point of view, treatment should be focused on first priority and major disease, such as for: perforation of intestine, open fracture of femur, live saving surgery of intra abdominal bleeding, etc. Skin closure that will produce a scar is not a priority/major concern, especially in emergency cases in which the first priority is life saving. Bad scar is considered a late problem and can be solved later. This viewpoint leads to the assumption that scar is a neglected/forgotten case in surgeries.

A bad scar such as hypertrophic scar or keloid is something unexpected and might be unpredicted by surgeons. In fact, bad scar is difficult dan annoying. Efforts to treat it surgically sometimes even worsen it. Non-surgical therapy does not give a consistent response. The result is variable. Various research and it efforts have been made in therapy but the mystery has not been revealed clearly, leads into frustration and deadlock in its treatment. Both doctors and patients consider this to be a natural process, that is inevitable and should be accepted and not regretted. This is a change of mind-set from helplessness into acceptance. This shows that the scar could not be just ignored as scar because it often causes unsolved problems for both doctors and patients. The knowledge of prevention, therapeutic modalities, and their level of evidence are very important in the treatment of scars.

Basically, the formation of bad scar can be avoided. A simple hypertrophic scar can be easily treated, either with surgery or nonsurgically. In the event of extensive hypertrophic scar or keloid, the treatment is likely to be difficult even encountering a deadlock because of recurrence. This creates a difficult situation for both surgeon and patient. On one hand re-surgery will produce recurrent



scar, even worse, but on the other hand there is helplessness and surrender to the situation, only followed the usual therapy that has not been used. If all the modalities of therapy have been used, the surgeon will re-do the procedures sequentially.

Nowadays there are about 25 known modalities for scar treatment with various approaches. However many treatment choices show variable results and sometimes dissatisfaction treatment selection is also based on recurrence. Most of those are non-surgical treatment. There are also topical treatment options. But it is considered inadequate because of lack of evidence base. Of these treatment mostly contain herbal extract medicine. The International Advisory Panel on Scar Management in 2002, since 11 years ago, has recommend the use of silicone gel, steroid injection and pressure therapy for initial management. For secondary management, it is recommended to use laser, silicone gel, pressure garment, which can be combined with surgery, steroid injections, radiotherapy and other modalities. Currently corticosteroid injection and silicone gel is a non-surgical method recommended and supported by evidence base. This technique has been chosen by most physicians.

Why is abnormal scar likely to happen and its therapy is not satisfactory?

1. There is an impression that procedure of wound closure/suturing not too important for surgeons.
2. There is no prevention for new case.
3. Surgeon does not notice the history of bad scar, and dose not prevent for the upcoming bad new scar.
4. The unclear mechanism of bad scar is still in study. There are two main pathways for the occurrence of abnormal scar such as: excessive collagen synthesis or failure of collagen degradation pathways that lead to the accumulation of collagen. They are important to be known to determine the therapeutic strategy.
5. Currently there are approximately 25 treatment modalities for abnormal scar which baffle doctors because none that can

deliver consistent therapeutic response despite the many option. Various combinations of therapeutic modalities are published. These produced a relatively common treatment response and recurrence rates were minimal.

6. There are only few studies with a high level of evidence as a reference in the protocol or standard therapy in scar treatment.

From the review conducted by Durani and Bayat (2008) which is an evaluation of keloid treatment for 25 years, 83% evaluation of keloid therapy is level 4 evidence in the form of case series, cohort study or low quality non-randomized controlled trial. Only 17% meet the criteria for level 2 which is a randomized controlled trial evidence related to the evaluation of silicone-based therapy or steroid therapy. Silicon-based is keloid therapy that has the highest level of quality evidence.

Currently, combination therapy is the best choice that we believe can provide optimal results:

- The combination of surgery with non-surgery modalities, such as surgery with silicone gel, or combination of surgery with corticosteroid injections or surgery with radiotherapy and silicone gel, and so forth.
- Combination between non-surgical modalities, such as corticosteroid injection with silicone gel, or a mixture of 5-FU injections with corticosteroids and silicone gel and so forth.

"Keep being a hero, by paying attention to patient's scar"

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