

EDITORIAL

Abdominal Adhesion

Adhesions are tissue reactions that are rather protective phenomenon occurring due to insult or trauma to tissues. Bands made of blood vessels, fibroblasts and connective tissue cells between abdominal wall and different organs are formed, and gradually they get matured and produce symptoms. Surgery is the main cause of adhesion in 90% cases and they are due to organ handling, exposure and drying out of organs and tissue, contact with foreign materials e.g. gauze, gloves with powder, suture materials etc. and blood clot that are not rinsed out prior to closure of the wound. Other than surgery, infections like appendicitis, diverticulitis, salpingitis, gynaecological infections, and also trauma and radiation may produce adhesions in 10% cases. Rarely, it may happen without any obvious reason^{1,2,3}.

Adhesions may not produce any symptoms but it may cause chronic abdominal pain and pelvic pain which sometimes mimic pain of appendicitis, endometriosis, diverticulitis, and it may cause female infertility and intestinal obstruction. Adhesions may become larger and tighter as time passes, and may cause problem years after surgery. About 60-70% adhesions are in small intestine^{4,5}.

No tests are available to diagnose adhesion, but if intestinal obstruction develops, it may be diagnosed by x-rays of abdomen in erect and supine position, barium contrast studies of lower gastrointestinal series and computerized tomography.

No treatment is required unless adhesions produce symptoms. Surgery is the only way to break the adhesions that cause abdominal pain, intestinal obstruction and infertility. But there is recurrence of adhesions in 10-20% of cases. Low residue liquid diet sometimes helps in reducing chronic abdominal pain and Traditional Chinese Medicine (TCM) are often used for the treatment of adhesions in oriental countries and it is claimed that the result is promising^{6,7}.

There is no way to prevent adhesions but meticulous surgery and gentle handling of tissue produce less adhesions. A special film like material (Seprafilm, impregnated with carboxymethylcellulose and hyalurenic acid), which would be absorbed by the body in about a week, can be inserted between the organs and the abdominal incision at the end of the surgery.

Laparoscopic surgery produce less adhesions as there is less drying of tissue and less tissue handling, and adhesiolysis can be done by this procedure, and there would be less adhesion formation after this procedure than what happens after open surgery^{8,9}. The findings demonstrated by Khan et al in this issue of this journal also support the proposition¹⁰.

Meticulous surgical practice should be optimum to minimize post-operative adhesions and adhesiolysis by laparoscopic surgery is more promising than by the conventional open surgery.

Imtiaz Ahmad

Professor of surgery

Holy Family Red Crescent Medical College

References:

1. Weibel MA, Majno G. Peritoneal adhesions and their relation to abdominal surgery. A postmortem study. *Am J Surg* 1973; 126: 345-353.
2. Ellis H. The magnitude of adhesion related problems. *Ann Chir Gynaecol* 1998; 87: 9-11.
3. Ellis H, Morgan BJ, Thompson JN, *et al.* Adhesion related hospital readmissions after abdominal and pelvic surgery: a retrospective cohort study. *Lancet* 1999; 353: 1476-80.
4. DeCherney AH, diZerega GS. Clinical problem of intraperitoneal postsurgical adhesion formation following general surgery and the use of adhesion prevention barriers. *Surg Clin North Am* 1997; 77: 671-688.
5. Abdominal Adhesions. IntelliHealth. 18 Aug. 2009
<<http://www.intelihealth.com/IH/ihtIH/WSI/9339/9414.html>>.
6. Su Fachun, *et al.* Clinical observation on Tao Zhi Zhi Po Fang used for preventing intestinal adhesion after surgical operation. *Chinese Journal of Surgery by Integrating Traditional Chinese Medicine and Western Medicine* 2000; 6: 404-405.
7. Wang Zhenyu, *et al.* Laparoscopy and combination of traditional Chinese medicine and Western medicine in adhesive intestinal obstruction. *Chinese Journal of Surgery with Integrated Traditional and Western Medicine* 2002; 8: 3-5.
8. Kavic SM. Adhesions and adhesiolysis: the role of laparoscopy. *Journal of the Society of Laparoendoscopic Surgeons* 2002; 6: 99-109.
9. Shayani V, Siegert C, and Favia P. The role of laparoscopic adhesiolysis in the treatment of patients with chronic abdominal pain or recurrent bowel obstruction, *Journal of the Society of Laparoendoscopic Surgeons* 2002; 6: 111-114.
10. Khan BU, Azim A, Barmon S, Khan SI, Laparoscopic adhesiolysis - an initial experience of is cases. *J Med Sci Res* 2010; 13: 3-8.