Inguinal hernia surgery is one of the most frequently performed elective operations in Poland, its estimated number amounting to approximately 60,000 a year. In the past twenty years in Poland, more than 300 reports and dissertations have been published, concerning inguinal hernias. Unfortunately, most of them have little merit in view of the accepted methods of patient selection and statistical analysis. However, these publications have largely confirmed the conclusions of current guidelines, considering management of inguinal hernias, elaborated by the European Hernia Society (EHS).

Risk factors of hernia development include smoking, persistent vaginal process of the peritoneum, asthma and chronic obstructive pulmonary disease, prostatic hypertrophy, constipation, collagenoses, aortic aneurysm, ascites, peritoneal dialysis and long-term heavy physical work. Only smoking cessation is justified in the prevention of inguinal hernia development.

Considering diagnostics, in case of an evident inguinal hernia the physical examination is sufficient. The differentiation between a simple and oblique hernia is not necessary to undertake the method of treatment. It is recommended to perform inguinal diagnostics only in patients with equivocal symptoms or persistent groin pain. The diagnostic course in such cases includes ultrasound, MRI, Val-salvy’s test, and herniography.

Indications for surgery include symptomatic inguinal hernias. In case of male patients with asymptomatic or minimally symptomatic inguinal hernias, watchful waiting is recommended as the management strategy. Incarcerated hernias (with symptoms of incarceration and/or occlusion) should be subject to emergency surgical intervention. According to current guidelines, all adult male patients with symptomatic inguinal hernias should be operated by means of the tension-free method using synthetic mesh. Surgical treatment using synthetic grafts-mesh, is associated with a statistically significant lower recurrence rate, as compared to the technique without mesh plasty. Lichtenstein and endoscopic (TAPP and TEP) techniques are recommended, as the best
scientifically proven tension-free methods in the management of inguinal hernias, provided that the surgeon has adequate experience in the selected method. Tension-free inguinal hernia repair should use non-absorbable synthetic or composite mesh. The use of an absorbable mesh is associated with increased risk of hernia recurrence. The use of a synthetic mesh significantly reduces the risk of hernia recurrence, regardless the method of implantation.

The use of a light and macropore mesh of reduced weight is associated with reduced postoperative discomfort and feeling of a foreign body, as well as improved well-being during the postoperative period. The use of a light mesh is associated with lower incidence of chronic inguinal pain. Open techniques, such as PHS/UHS, Kugel patch, plug and patch (mesh-plug) and Hertra mesh (Trabucco), provide similar results as in case of Lichtenstein’s method, during the short observation period. However, the cost of synthetic mesh implantation is much greater in the above-mentioned methods. In a situation where we do not use a synthetic implant, Shouldice’s method should be used, keeping in mind that the learning curve for this method is long and should be used only by surgeons experienced in the technique. Shouldice’s method is a low-tension technique, which does not change the fact that its use is burdened with a higher recurrence rate, as compared to tension-free methods. Young, male adults (18-30 years) are burdened with a 5-20% risk of recurrence, when hernia repair was performed without the use of a synthetic implant.

The use of endoscopic techniques (TAPP and TEP) is limited, due to high costs, as compared to Lichtenstein’s procedure, with comparable distant treatment results. Undoubtedly, endoscopic techniques (especially TAPP) are recommended for bilateral hernia repair, in active people whose work requires rapid return to full activity, as well as in case of recurrent hernia, in a patient, after a previous tension-free procedure from the anterior approach.

Considering antibiotic prophylaxis it has been established that in case of hospitals with a low rate of infectious complications (<5 %), there are no indications for routine administration of antibiotics in case of elective procedures for open hernia repair in low-risk patients. In case of endoscopic procedures antibiotic prophylaxis is not recommended, since it does not statistically reduce the already low rate of postoperative wound infections. In case of inflammatory risk factors (recurrence, elderly age, immunosuppression, diabetes mellitus, obesity) or surgery (long duration, drainage) antibiotic prophylaxis should always be thoroughly considered.

Current EHS guidelines recommend the use of local anesthesia in all cases of open procedures, considering primary, reducible hernias in adults. General anesthesia (short-acting drugs) associated with infiltration anesthesia is a valuable alternative to local anesthesia. Spinal anesthesia, not recommended by EHS, seems to be worth considering, as it is associated with high patient and surgeon comfort, and low complication rate. Wound injections by means of long-acting analgesics are recommended for postoperative pain control, which allows to better control pain and reduce the use of analgesics.

The incidence of chronic pain after hernioplasty amounts to 10-12%. The risk of chronic pain after mesh implantation procedures is lower, as compared to procedures without mesh implantation. In case of endoscopic procedures the risk is lower, as compared to open procedures. The use of light mesh with large pores (>1000 m) seems to reduce inguinal discomfort in long-term follow-up after hernia repair procedures. The identification of all three nerves (iliohypogastric, ilioinguinal, genitofemoral) during open surgery reduces the possibility of their damage and chronic pain. When considering only postoperative pain the light mesh should be used by choice. When considering chronic pain, endoscopic methods (in case of an experienced team available) are better than open methods. The multidisciplinary approach is recommended in the treatment of chronic pain and limitation of routine surgery, due to lack of evidence considering the efficacy and course of different surgical methods. The surgical treatment of selected cases might prove beneficial for the following patients: resection of nerves, mesh removal as the cause of pain, and removal of sutures or staplers during laparoscopic procedures.

Treatment of inguinal hernia on a one-day basis is as safe and effective as hospitalization, although more cost-effective and may be performed, regardless the operative technique.
Thus, the above-mentioned procedure should be considered in each patient.

It is recommended not to restrict everyday activities after hernioplasty during postoperative care, with recommendations to restrain from lifting heavy objects for a period of 4 weeks.

EHS guidelines concerning treatment of inguinal hernia plasty complications include the following issues. In case of open surgery, aspiration of hematomas is recommended in the situation of increased skin-tension. The use of drains is recommended in only selected cases, such as significant intraoperative blood loss and coagulopathies. It is recommended not to aspirate serous lesions, due to possible risk of increased local infection. It is recommended that the patient empty his urinary bladder, prior to elective open and laparoscopic surgery. In case of a large hernial sac and congenital hernia the distal part of the sac should not be supplied, in order to avoid increased risk of testicular atrophy and hydrocele development. Spermatic cord structure damage should be avoided. Patients after open surgery of the lower abdomen and previous pelvic radiotherapy should not be operated by means of the endoscopic method. Due to the possibility of postoperative adhesions and intestinal obstruction it is recommended to use the TEP technique when endoscopically supplying the hernia. It is recommended to close the 10 mm and larger trocar holes. The first trocar during endoscopic procedures should be introduced by means of the open technique.

REFERENCES


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Adress correspondence: 31-501 Kraków ul. Kopernika 40
e-mail: artur.pasternak@uj.edu.pl