COEXISTENCE OF THE MEGAOESOPHAGUS AND ANKYLOSING SPONDYLITIS – CASE REPORT

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Megaoesophagus is the result of the disorder of peristalsis and slow decompensation of muscular layer of the oesophagus in the course of achalasia cardiae (1-4). It is characterized by a narrow cardiac section of the oesophagus and prestenotic dilatation above the oesophagus. Prestenotic dilatation is a secondary effect, which arises as a result of oesophageal muscular layer decompensation caused by the persistent deposition of food in the oesophageal lumen.

During the initial stages of the disease, the oesophageal lumen expands and the muscular layer hypertrophies. Eventually, thinning of the muscular layer occurs and the oesophagus becomes atonic. Megaoesophagus is usually diagnosed late because of its atypical and inconsistent presentation. Dysphagia with regurgitation of undigested food is common; however, nausea is usually not associated with the disease course. During sleep, the retrograde movement of gastroesophageal contents will lead to aspiration and subsequent upper respiratory tract inflammations (5). Megaoesophagus may also coexist with systemic, infectious and endocrinological disease (6, 7). Surgical treatment of advanced stage disease (end stage of achalasia cardiae), referred to as megaoesophagus, is difficult, however, there are a variety of potential procedures (8).

Here, we presented a case in which oesophago-gastric bypass from the pedunculated portion of jejunum was applied to avoid the narrow section of oesophagus during food transport (9).

CASE REPORT

53-years old man PW. (history number 1150/03) with advanced stage megaoesophagus (end stage of achalasia cardiae), was treated in the
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For many years, the patient was treated for ankylosing spondylitis, which was diagnosed on the basis of clinical symptoms, such as a high level of inflammatory indicators (high value of total protein – 81 g/l, IgG – 21.48 g/l, and gamma-globulin – 30.8%) and X-ray examination, which revealed degenerative changes and enthesopathy. The patient also complained of progressively worsening dysphagia over a 20 year period.

Chest X-ray showed significant oesophageal expansion. Endoscopical examination revealed deposition of chyme (2 litres was removed during the procedure) in the lumen of broadened oesophagus. Several ulcerative lesions of different sizes, depths, and stage of healing were found in the lower part of the oesophagus. Histopathological examination showed oesophagitis chronica magni gradus ulcerosa (no. 30534/03). Contrast X-ray examination showed distension of the cervical and thoracic oesophagus up to 15 cm wide. Also, the subphrenic section of the oesophagus was narrowed to the filiform lumen in the 1cm length. Passage of contrast through the narrowed section of the oesophagus was difficult. Moreover, radiological examination showed total deficiency of peristaltic wave in the oesophagus (fig. 1). The patient was diagnosed with megaoesophagus and qualified for surgery. The abdominal cavity was exposed with an upper midline incision and the cardia with oesophagus was moved into the oesophageal hiatus. Next, the loop of jejunum was isolated and transferred behind the colon and stomach to the hiatus. The proximal end of the intestinal loop was side to side anastomosed to the oesophagus proximally to the narrowing and the distal end was anastomosed to the prepyloric part of the stomach. Free fragments of jejunum were side to side anastomosed. Radiological examination of upper alimentary tract after operation showed good passage of contrast from the oesophagus through the jejunal by-pass to the stomach (fig. 2).

After a year and a half, X-ray examination revealed decreased oesophageal dilatation, good passage of the oesophagus through the by-pass, and gastrectasis (fig. 3). A gastrojejunal anastomosis was performed because of altered stomach emptying (fig. 4). During the operation, a full gastric biopsy was taken. Histopathological examination revealed gastritis chronica medi gradus. The nerve fiber was not found (no. 28721/05). Moreover, due to cholelithiasis, a cholecystectomy was performed. The patient was discharged from the hospital in good condition.

Examinations conducted two and half years after the first operation (and a year after the second one) showed correct function of the jejunal by-pass and good stomach emptying (fig. 5). During endoscopical investigation, complete healing of ulcerations was
observed and was confirmed by histological examination: oesophagitis chronica medii gradu (no. 28668/06).

The patient does not report any difficulties with eating. Ambulatory follow-up and rheumatological treatment was continued.

DISCUSSION

Pathogenesis of achalasia cardiae and megaoesophagus is still unknown (1, 2, 3). Coexisting systemic and endocrinological diseases are associated with megaoesophagus in the specialist literature (5, 6). A wide spectrum of rheumatologic diseases has been associated with peristaltic disorders of the alimentary tract, as observed in this case. Extramucosal incision of the muscular layer of cardiae by Heller’s with antireflux procedure does not result in the desired effect.

Different methods of surgical treatment for megaoesophagus are partial or total oesophagectomy with thoracic or cervical oesophagogastrostomy, partial oesophagectomy and reconstruction of the continuity of the digestive tract with a large intestine transplant, subtotal ga-
srectomy with vagotomy, or creation of a supplementary oesophagus (8, 10). Limitations of these procedures include: the vastness of operations, possibility of remaining gastrooesophageal reflux, which may lead to inflammation of the oesophagus and other related complications. A high complication and fatality rate is associated with extensive operations that require opening two body cavities. Therefore, the following solution was applied, consisting of producing a bypass-like span from a pedunculated part of jejunum, and avoiding a reduced oesophageal section in food transportation (9). This method can be applied to patients diagnosed with decreased oesophageal motor function and usually is therapeutically effective.

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COMMENTARY

In spite of the fact that the etiology of cardiochalasia remains unknown, diagnosis is based on manometric examinations with absence of esophageal peristalsis. Due to acquired, inflammatory, autoimmunological or congenital degeneration of Auerbach’s neural cells, smooth muscle of the lower 2/3 of the esophagus lack proper innervation, and thus, cannot generate proper, propulsive peristalsis. Lower esophageal sphincter denervation leads to tonic contraction rendering impossible nutritional content passage from the esophagus to the stomach. Difficulties in swallowing are the most common subjective symptoms mentioned by the patients. Retention of food in the esophagus leads to its dilatation and in extreme cases – megaoesopha-
gus.

The Authors of the study presented a case of advanced cardiochalasia in a patient with an-
kylosing spondylitis. The functional character of esophagostenosis was confirmed by means of radiological examinations and esophagoscopy. The description of the case lacks information concerning previous methods of achalasia therapy.

The choice of the therapeutic method proposed by the Authors is controversial. In my opinion, the short, one-centimeter segment of esophageal stenosis would have been amenable to balloon angioplasty or simple myotomy with an anti-reflux procedure, which is considered less of a burden on the patient, in comparison to anastomosis using an isolated intestinal loop. Our own experience considering more than 200 cardiochalasia operations demonstrated that anterior myotomy with anterior fundoplication by means of Dor’s method effectively improved food swallowing and was safer in comparison to en-
endoscopic procedures used in cases of functional esophageal stenosis.

The intention of instrumental or surgical methods of treatment in cases of cardiochala sia consists of the improvement of esophageal emptying. However, none of the mentioned methods restore effective peristalsis and nutritional content passage is possible only because of gravity. According to many surgeons, bypass surgery is considered therapeutically least effective, although in the presented case-clinically efficient. Considering the stenosed esophagus below the anastomosis, retention of nutritional contents will always be present with a tendency towards an inflammatory reaction, and thus the high probability of cicatrical organic stenosis.

Considering the mean lifespan of male subjects in Poland, the perspective of several tens of years of life of the above-mentioned patient is connected with the risk of esophageal carcinoma development. According to Mark Orringer and Tom DeMeester (most experienced in the surgical management of cardiochala sia), such patients should be qualified towards esophageal resection with the formation of an artificial esophagus from the bowels.

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