Cesarean section on a patient who suffered from iatrogenic oesophagus injury – case report

IWONA JAGIELSKA, MARTyna STANKIEWICz, MAREK GRABIEC

Abstract

Introduction: Oesophageal perforation is a state of direct danger of life. It may occur by itself or as a complication of surgical procedure. Oesophageal perforation occurs very rarely and mostly it is observed during intubation. It may also arise as a complication of thyroidectomy. The consequences of oesophageal perforation may be dramatic and patient in such condition requires complicated surgical procedures and subsequently long term treatment. Goal: The reason of this work is to describe pregnancy and labor of a patient who had oesophagus injury as a consequence of thyroidectomy. Case study: Rare case of a pregnancy and labor of a patient who due to the previous surgery had suffered an injury of oesophagus. This article describes the above on the basis of a case of woman who due to the previous thyroidectomy suffered from injury of oesophagus. The patient has undergone complicated surgical procedures and has been long treated conventionally. The above enabled the patient to function normally. After a few years the patient became pregnant. Being hospitalized and under a care of a gynecology doctor was simultaneously consulted with surgeons from Warsaw Clinic where she was operated before. Before labor she was transferred to the University Hospital in Bydgoszcz where as a result of cesarean section a child was born (received 7 points of Apgar.) The above case proves possibilities of successful treatment of the oesophagus injury. The pregnancy and labor (cesarean section) do not have a negative impact on patients health.

Key words: thyroidectomy, injury of oesophagus, perforation, transplantation, cesarian section

Introduction

An oesophagus perforation is a life-threatening state and occurs very rarely. It can appear idiopathically or as a surgical complication [1]. It is observed most often during intubation. It is less often diagnosed after thyroidectomy, usually after the procedure of complete thryroid removal. If it occurs during pregnancy it is usually connected with intertempate vomiting in the first trimester [4].

For the first time idiopathic oesophagus rupture was described by Boerhaave in 1724 – in a case of Baron Wassenaar, the Grand Admiral of the Dutch fleet who was known for overeating and then evoking vomit [3].

Typical clinical diagnosis is based on three symptoms (vomiting, subcutaneous emphysema and very intense pain in the chest), those do not concern every patient though [1]. Favourable prognosis depends on the early diagnosis of that complication.

Case description

31-year-old female patient during the first pregnancy, week 39 day 5, after strumectomy and iatrogenic oesophagus injury with subsequent reconstruction of neck oesophagus with the help of jejunal free autograft, was admitted to Obstetrics, Women’s Health and Oncological Gynecology Clinic in Bydgoszcz to decide on the method of delivery.

In 1998 the patient had a subtotal strumectomy due to nodular goitre and in 2005 total strumectomy in General Surgery and Endocrine Clinic of Collegium Medicum in Bydgoszcz. The complication after the surgery was neck oesophagus damage which led to mediastinitis. Resurgery was conducted during which distal part of the oesophagus was closed shut with suture exclusion and salivary fistula on the neck was exteriorized. During the surgery a short stump (about 2cm long) opened into the posttrachea space was found. Nutritional gastrostomy was carried out. The patient was transported to Tuberculosis and Lung Diseases Institute V Surgical Clinic in Warsaw where endoscopic and graphic diagnostics were conducted along with mediastinum and stump’s area drainage. After the mediastinitis receded, the patient was discharged from hospital. After a few weeks break, during the subsequent control hospitalisation in the above mentioned Institute no features of draining contrast onto the neck from the upper part of the oesophagus and further regression of the mediastinitis was observed.
After the surgical consultation the patient was qualified for further treatment in the Vascular and Transplant Surgery Clinic of the Medical Academy in Warsaw. A month later reconstruction surgery of the neck oesophagus with the help of jejunal free autograft was conducted. About 20 cm of the jejunum was cut out and its circumferential end was joined with the distal end of the oesophagus. During the surgery laparotomy, gastrostomy and sternotomy were performed. After a few days gastrostomy was removed. The patient went through a long period of recuperation and rehabilitation. A balloon-like enlargement of the oesophagus, described by the patient as “a throat pouch”, appeared after exertion or a hearty meal in the place of the reconstruction. Five years after the surgery the patient passed pregnant in a natural way. The pregnancy progressed in a normal way and the gravid was constantly in the custody of the obstetrician, a few times she telephonically contacted doctors in Warsaw who operated on her. Supervised by an endocrinologist, the patient continued taking Euthyrox. The patient didn’t observe any new ailments in the state of her alimentary canal, there were only the ones which she had before the pregnancy. In the second half of the pregnancy period the pregnant woman started to worry about the delivery process and the possibility of alimentary canal damage. That is why the patient consulted psychologist and psychiatrist.

In due delivery time the pregnant was directed to the local Clinic to give birth to a baby. The method of termination of the pregnancy was subject to the decisions of the Warsaw Clinic doctors who operated on the patient. Because of the innovative character of the surgery and lack of experience with the course of pregnancy and delivery of women who underwent such surgeries, the surgeons suggested cesarean section. According to them natural delivery would be bound with a danger of rupture of the oesophagus. The patient also submitted a psychiatrist’s certificate suggesting surgical termination of pregnancy due to patient’s neurotic and anxiety disorders probably caused by previous experiences.

Taking into consideration the results of surgical and psychiatric consultancy the decision was made to perform a cesarean section. After familiarizing with the medical history of the patient the anaesthetists, decided to use a subarachnoidal anaesthetic. According to their opinion, intratracheal intubation should be avoided because of the frail structure of the jejunum transplanted to the oesophagus that could get easily damaged while doing so.

In the 40th week of the pregnancy cesarean section was conducted and a boy in good health was born, with Apgar score of 9. In the early puerperal stage no complications were observed. The disorders appearing during exertion and eating connected with oesophagus surgery did not intensify. Lactation processed properly. The baby was breast-fed from the beginning. The patient was discharged from hospital along with the infant three days after the surgery.

**Discussion**

Oesophagus perforation is highly dangerous. The mortality rate is 5.5-29% and depends on the type of rupture and its localisation [2-4]. There is little information about this complication in literature, especially concerning pregnant women. Dresner and partners described a case of oesophagus rupture of a pregnant woman during a natural delivery [3]. Rissoan and partners, however, published a case of perforation concerning a woman in third month of pregnancy suffering from in-temperate vomiting [9].

Vomiting is a known etiological reason for oesophagus rupture [4]. They can appear during delivery – caused by analgesic substances among others pethidine and morphine [1, 5]. Perforation occurrence risk is more probable if muscular coat is abnormal e.g. its depletion [2-4, 10, 11]. It concerns our patient who had a part of small intestine transplanted to the oesophagus. The wall of small intestine characterises with a frail structure. After the conversation with the patient we know that during extensive exertion transplanted to the oesophagus wall of the intestine widens and adopts a baggy shape. Too extensive widening of the autotransplant during tenesmus and increase of the intra-abdominal pressure could cause its perforation. According to the information included in literature the increase of intra-abdominal pressure during tenesmus magnifies the oesophagus rupture [3, 9].

The worries of the obstetric staff concerned not only the possibility of perforation. The tension of every muscle that can be observed during the second part of the delivery could also endanger the patient. Neck muscle could have clamped the soft wall of the transplanted intestine in the place of stable-built oesophagus.

Dramatic past of the patient was an undisputed factor of terminating the pregnancy with a cesarean section. The surgeries that she went through and anxiety disorder which were probably triggered by the above mentioned surgeries were to dangerous to risk natural delivery.
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References


Iwona Jagielska
Department of Obstetrics
Female Pathology and Oncological Gynecology
Collegium Medicum
Nicolaus Copernicus University in Bydgoszcz
ul. Ujejskiego 75, 85-168 Bydgoszcz, Poland
e-mail: martis@windowslive.com