

CLINICAL CASE

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JAN GNUS, WOJCIECH WITKIEWICZ, WILLY HAUZER, MARIUSZ KOSIŃSKI, PIOTR PŁAWSKI,
SEBASTIAN BAŁASZ

Abdominal Symptoms in Patient with a Severe Hypothyreosis

Objawy brzuszne u chorej na ciężką niedoczynność tarczycy

Vascular and General Surgery Department Regional Hospital of Wrocław, and Postgraduate Studies
of the Wrocław Medical University, Wrocław, Poland

Abstract

The case of a 54-year-old patient, who was treated in the surgical ward due to severe abdominal pain, in the course of which a loss of consciousness with circulatory arrest appeared, was described. From the anamnesis, additional examinations made, i.a. CT, the patient was operated on, with the supposed diagnosis of ruptured abdominal aortic aneurysm. Intraoperatively the diagnosis was not affirmed. After performing additional laboratory tests a severe hypothyreosis was diagnosed. Despite intensive treatment, the patient died in the second day after the surgery, due to multiorgan dysfunction. In the course of severe hypothyreosis peritoneal symptoms, liquid in body cavities – peritoneal, pleural and in pericardial sac may occur (*Adv Clin Exp Med* 2005, 14, 5, 1117–1119).

Key words: hypothyreosis, peritoneal symptoms, myxoedema.

Streszczenie

W pracy przedstawiono przypadek 54-letniej pacjentki, która z powodu silnych bólów brzucha, a następnie zasłabnięcia z nagłym zatrzymaniem krążenia, była leczona na oddziałach chirurgicznych. Na podstawie wywiadu, wykonanych badań, między innymi TK, pacjentkę operowano, podejrzewając pękniętego tętniaka aorty brzusznej. Śródoperacyjnie nie potwierdzono tego podejrzenia. Po wykonaniu dalszych badań diagnostycznych rozpoznano ciężką niedoczynność tarczycy. Mimo intensywnego leczenia, w następstwie wielonarządowej niewydolności, w drugiej dobie po zabiegu nastąpił zgon pacjentki. Ciężka niedoczynność tarczycy może przebiegać z objawami otrzewnowymi, płynem w jamach ciała – otrzewnowej, opłucnowej oraz worku osierdziowym (*Adv Clin Exp Med* 2005, 14, 5, 1117–1119).

Słowa kluczowe: niedoczynność tarczycy, objawy otrzewnowe, puchlina brzuszna.

Hypothyreosis's prevalence is 5 times higher in women than in men. Its occurrence increases with age [4, 6, 8].

This disease may be congenital or acquired. A deficiency of thyroid hormones influences all tissues and organs; the effect is that the symptoms resulting from the deficiency of those hormones come from many organs. The most common symptom is accumulation of glycosaminoglycans in hypodermis, i.e., myxoedema. The accumulation of this hydrophilic substance combined with an increased permeability of capillary vessels cau-

se swelling of eyelids, face and the whole of the body including the cardiac muscle. The accumulation of glycosaminoglycans is an effect of an increased decomposition of mucopolysaccharides rather than hypersynthesis. Myxoedema occurs both in hypothyreosis (as an oedema pretibialis) and hyperthyreosis and it differs only with size and location. In the case of advanced hypothyreosis the myxoedema is generalised. It includes the whole of hypodermis, skeletal muscles and the cardiac muscle, the whole face, tongue, vocal cords, peripheral nerves. Rarely ascites may also

occur, along with hydrothorax and hydropericardium [5, 8].

Monosymptomatic hypothyreosis may cause diagnostic problems, given symptoms of chronic constipation, parasthesia, asthralgia, myalgia, headache, mental disorders, haemorrhagic myomas. In that case, confirming the correct diagnosis is possible only with performing additional laboratory hormone tests [7, 8].

Primary hypothyreosis is a relatively frequent endocrinic dysfunction. Typical symptoms are often accompanied by non-typical hypothyreosis-related symptoms, which are also observed in other diseases, and due to this fact it may not be diagnosed properly [5–7]. Abdominal dropsy is an unusual symptom to accompany hypothyreosis [1–3, 6].

Case Report

54-year-old patient BM (02/01367), who had been previously treated in one of the surgical wards in Lower Silesia, was admitted to the vascular and general surgery department in authors' hospital as an emergency case with acute abdominal pain. The day before she had suffered a very severe abdominal pain with sudden cardiac arrest. After the efficient resuscitation she was sent to the Department of Anaesthesiology and Intensive Care of the County Hospital. In additional examinations a severe anaemia was found: (Hb 6.2 g/dl, RBC 2.24 M/ul., HCT 18.6%, MCV 83 pf, MCH 27.7, MCH 33.3, RDW 19.0, PTL 244, MPV 9.6, PCT 0.23).

A sample of the exudate from the abdominal cavity showed: colour: yellow; clarity – turbid; density – 1015 g/ml; pH 8.0; sedimentation: round epithelium count 2–4; leucocytes 8–12; erythrocytes scarce; liquid protein 3.32 g/dl; glucose 123 mg/dl; LDH 772 U/l, which led to conclusion of an exudative liquid.

Fig. 1 shows a tomogram of the abdominal cavity without contrast while illustration no. 2 shows a tomogram with contrast.

EKG showed rhythmic sinus ryth with frequency 70/min and the disturbance of the ventricular repolarisation. In the RTG of the thorax in lying position liquid in both pleural cavities was found, diffused up until the apex of the lungs, which caused darkening of both lungs. Visible in upper areas lungs did not show any changes, the medium was regular.

The CT of the abdominal cavity showed: „in both lungs and the pleural cavities a considerable amount of liquid present, which led to atelectasis of most of the segments. The sceletal system of the thorax ribs did not show any post-traumatic chan-

ges. Below the point where the renal arteries branch from the abdominal aorta a mass was observed that adhered to the aorta and expanded over a 5-cm distance to reach the aortic bifurcation into the iliac arteries. The effusion may reflect a ruptured abdominal aortic aneurysm. An inflammatory reaction of the surrounding tissues was visible. The lumen of the atherosclerotic aorta was 2 cm”.

The patient was provided with controlled respiratory, anti-oedema treatment, catecholamines, blood transfusion. Following the aforementioned therapy the patient recovered consciousness and her circulation was stable.

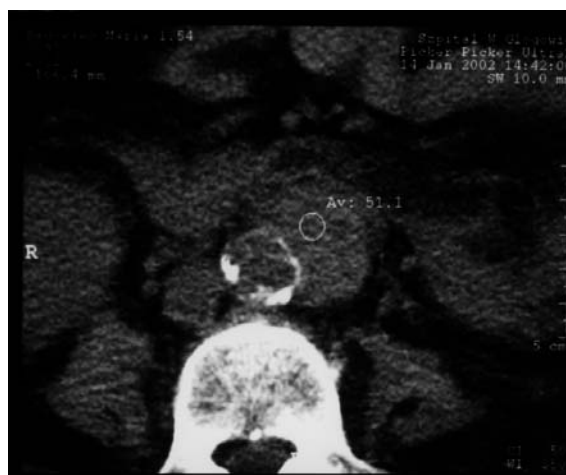


Fig. 1. CT of abdominal cavity: cross-section of the abdominal aorta below the renal arteries branching point with effusion space; no contrast

Ryc. 1. Tomografia komputerowa jamy brzusznej: przekrój aorty brzusznej poniżej odejścia tętnic nerkowych z przestrzenią płynową; zdjęcie bez kontrastu



Fig. 2. CT of abdominal cavity: cross-sections of the abdominal aorta below the renal arteries branching point with effusion space; contrast – Ultravist

Ryc. 2. Tomografia komputerowa jamy brzusznej: przekrój aorty brzusznej poniżej odejścia tętnic nerkowych z przestrzenią płynową; zdjęcie z kontrastem – Ultravist

On account of the peritoneal symptoms and taking into consideration the supposed diagnosis of abdominal aortic aneurysm in the CT of the abdominal cavity, the patient was sent to further treatment into the vascular and general surgery ward. The patient was operated on as an emergency case. In course of the operative procedure, 1.5 litres of the liquid was found in the abdominal cavity; in the retroperitoneal area the oedema of the paraaortic tissues was observed. The effusion liquid was aspirated and the abdominal integuments were sutured. The patient was in severe condition, unconscious, catheterised, with symptoms of chronic congestive heart failure. Laboratory test results: TSH 60.23 μ U/ml (standard: 0.49–4.67), fT4 5.15 pmol/l (standard: 9.15–23.80), fT3 1.69 pmol/l (standard: 2.23–5.35). EKG showed signs of a recent myocardial infarction with increased level of CPK and troponine I 6.2 ng/ml (standard < 0.5).

During the stay in the Intensive Care Unit, the patient was provided with controlled respiration, high doses of catecholamines and Euthyrox per rectum $2 \times 50 \mu\text{g}$. A puncture was performed the right side pleural cavity, oedema was decompressed and liquid was removed from the left pleural cavity. On the second day the patient showed a persistent recurrent arrhythmia in the form of ventricular fibrillation and ventricular tachycardia; several polymorphic extrasystoles occurred which needed resuscitation procedure and anti-arrhythmic medication. Despite the drugs given and assisted circulation and controlled respiration, the normal normal heart rate was not acquired. After another resuscitation procedure the patient was called dead.

Discussion

We present a very rare case of severe hypothyreosis accompanied by peritoneal symptoms. A sudden development of the disease with the loss of consciousness and sudden heart arrest, laboratory examinations made, CT and peritoneal symptoms might have suggested bleeding in abdominal cavity and may suggest the need of laparotomy.

Taking into consideration the sudden development (sudden cardiac arrest), decrease in Hb in blood to the value of 6.2 g/dl, the CT image in which ruptured abdominal aortic aneurysm was suggested, the patient was admitted to surgical treatment in an emergency mode. An intraoperative observation showed the regular organs of the abdominal cavity with 1.5 liter of fluid accompanied by the periaortic tissues oedema. Performed laboratory tests revealed hypothyreosis.

On the first day after the surgery the myocardial infarction occurred, which was ascertained by EKG and in the level of CPK – 120 U/l and troponin I – 6.2 ng/ml. Despite intensive treatment on the first day after the surgery the arrhythmia occurred (ventricular fibrillation and ventricular extrasystoles) which led to cardiac arrest. Sudden development of the disease accompanied by acute abdominal pain, decrease in Hb and aforementioned symptoms visible in the thorax and CT may accompany many illnesses [4–7].

The signs of hypothyreosis may occur in various diseases, and because an acute hypothyreosis is a very rare case, they can stay undiagnosed. Ascites occurs extremely rarely in hypothyreosis and may be the sign of many other severe diseases [1–3].

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Adres do korespondencji:

Jan Gnus
Regional Hospital of Wrocław
Vascular and General Surgery Department
Kamieńskiego 73a
51-124 Wrocław
Poland

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