



Oktatás, kutatás, gyógyítás: 250 éve az egészség szolgálatában Autopsy practice Case report

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Anamnesis 1.

- 73 years old woman
- Diabetes mellitus, hypertension for 20 years
- Left hip arthroplasty
- In the past year she suffered from pneumonia right inferior lobe and left lung
- 6 month ago hospitalization because of atrial fibrillation
- 3 month ago hospitalization due to septic condition pneumonia, uroinfection.
- 3 month ago strong, move limiting pain in the back painkiller treatment.



Anamnesis 2.

Before her decease she was treated in the hospital for 2 month.

Demand for circulatory support

Detected pathogens:

Sputum: Staphylococcus aureus

Urin: Candida glabrata

Haemoculture: Enterococcus faecium

Treated with specific antibiotics and antifungal drugs.

Cardiac failure – diuretic treatment, blood pressure elevation/normalization. Cardiac and respiratory insufficienty – death.



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Clinical diagnoses

Cardiac and respiratory insufficienty Sepsis Pneumonia Urinary infection (Enterococcus) Hyperglicemia Paroxysmal atrial fibrillation Cardiac decompensation Hypertrophic cardiomyopathy? (apical) St.p. ventricular resection St.p. left hip arthroplasty Diabetes mellitus (type 2)(BOT therapy) Hypertension **Nephrosclerosis** St.p. pulmonary embolism? Spondylosis Osteoporosis



Abdominal cavity – peaceful statement







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Abdominal cavity – peaceful mesenterium





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Abdominal cavity – peaceful appendix





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Thoracic cavity - free





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Macroscopy of the lungs

Right lung

Left lung





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Macroscopy of the lungs

Right lung- hilus

Left lung- hilus







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Kidney







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Stomach





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Stomach and duodenum





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Retroperitoneum with vertebral column from the direction of diaphragma - right psoas major muscle abscess







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Lumbar segment of vertebral column – intact left psoas major muscle





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Right side of vertebral column with psoas muscle – no sign of vertebral infection





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Microscopy - lung



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Microscopy - lung







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Microscopy - lung







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Comparison of clinical diagnoses and autopsy findings

Clinical diagnosis
Cardiac and respiratory insufficienty
Sepsis
Pneumonia
Urinary infection (Enterococcus)
Hyperglicemia
Paroxysmal atrial fibrillation
Cardiac decompensation
Hypertrophic cardiomyopathy? (apical)
St.p. ventricular resection
St.p. left hip arthroplasty
Diabetes mellitus (type 2)(BOT therapy)
Hypertension
Nephrosclerosis
St.p. pulmonary embolism?
Spondylosis
Osteoporosis

Autopsy finding Mild pulmonary edema

> Mild pneumonia No sign

Mild pulmonary edema Not confirmed Not confirmed Scar on the skin

> Atherosclerosis Confirmed Not confirmed

Psoas abscess





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Discussion

The hip arthroplasty was on the left side. The abscess was found in the right psoas muscle.

We did not find any physical connection between the surgical area and the abscess.





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Discussion – Psoas abscess

According to the pathogenesis:

Primary

Secondary





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Discussion – Primary psoas abscess

More often in children

Tropical and developing countries

Asia, Africa: 99% primary Europe, North-America: 17-61% primary





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Discussion – primary psoas abscess

Result of hematogenous or lymphatic seeding from a distant site

Risk factors: diabetes iv. drug HIV-infection renal failure

Trauma and hematoma formation

Complication of epidural anesthesia



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Discussion – Secondary psoas abscess

Result of direct spread of infection to the psoas muscle from an adjacent structure

Risk factors: Trauma Hip, lumbar spine and inguinal surgery





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Discussion – Secondary psoas abscess possibilities of formation 1.

Vertebrae: osteomyelitis - infection spreads from bone and perforates the psoas sheath, may be followed by formation of epidural abscess.

Demonstration of a psoas abscess should prompt investigation for a possible vertebral source – osteomyelitis.

Hip arthroplasty: 12 % of patients had abscess in a study of 106 patients.

Hematogenous infection and history of neoplasm are predictors of psoas abscess.

Hip pain in patients with Crohn's disease should prompt consideration of psoas abscess (0,4-4,3%) Arthritis is a well-known extraintestinal manifestation of Crohn's disease – Differential diagnostic problem - if hip pain is initially attributed to arthritis.



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Discussion – Secondary psoas abscess possibilities of formation 2.

Appendicitis, colorectal cancer, abdominal surgery

Infection and rupture of aortic aneurysm (20%)

Complication of renal surgery Urinary infection Propagation of renal abscess

Ruptured abscess of pancreas

Instrumentation involving the inguinal or lumbar region



Discussion - Diagnosis

CT – most frequently used Nuclear modalities (identify occult foci of infection) - rare Ultrasound – low sensitivity



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Take home message

Highlighted risk factor: diabetes.

In the last year recurrent pneumonia and uroinfections.

Hematogenous spread to the psoas muscle. The infection was not connected to the hip arthroplasty.

The abscess would never have found without autopsy.



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Thank you for your attention.





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