

# VIRCHOWS ARCHIV

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**Abstracts**

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morphologically and histopathologically distinct but studies have shown histological overlap between so-called “burnt-out” sarcoid and AC. This case highlights the diagnostic challenge for the histopathologist.

**Methods:** A middle-aged male with no past medical history, presented with syncope and complete atrioventricular block and underwent dual-chamber pacemaker insertion. Imaging showed biventricular dilatation, late gadolinium enhancement and possible FDG avidity within hilar lymph nodes. However, the study quality was poor. Despite immunosuppression therapy for suspected sarcoid, the patient rapidly deteriorated into severe biventricular failure, necessitating cardiac transplantation.

**Results:** Macroscopic examination of the explanted heart showed right ventricular wall atrophy and fibrofatty replacement. The left ventricle was largely normal.

Microscopy showed extensive fibrosis and fatty replacement of the myocardium in the right ventricle, with extension into the posterior left ventricle, with focal areas of lymphocytic inflammation but the inflammatory cells did not appear to be associated with myocyte damage. There was a single giant cell present but no well-formed granulomas were identified.

**Conclusion:** The distribution of fibrofatty replacement without granulomas suggests AC. Genetic confirmation is awaited. Following cardiac transplantation the patient shows no evidence of recurrent sarcoidosis. Histological features of cardiac sarcoid can mimic AC, thus posing a diagnostic difficulty for histopathologists.

#### E-PS-03-012

##### Investigation of the presence of neutrophils and macrophages in the tissues of calcified aorta affected by atherosclerosis

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**Background & objectives:** The presence of aortic calcification causes severe tissue overstretching. Neutrophils and macrophages promote experimental abdominal aortic aneurysm formation.

**Aim:** to compare the number of neutrophils and macrophages in the tissue of the atherosclerotic aorta with calcification and without it.

**Methods:** We examined 30 samples of aorta with calcification (group I) and 10 samples of aorta wall tissue without biomineralization (group II), which were considered as control group. All samples were examined by histology and immunohistochemistry. Samples were fixed, embedded in paraffin and analysed for neutrophils and macrophages accumulation with anti-MPO and anti-CD68 antibodies.

**Results:** MPO expression was increased in aortic tissues with calcifications ( $42.08 \pm 2.85$  cells per  $1 \text{ mm}^2$ ) in comparison to those without them ( $33.3 \pm 2.23$ ,  $p < 0.05$ , Student's *t*-test). Both groups I and II had  $48.31 \pm 3.53$  and  $32.1 \pm 2.69$  macrophages per  $1 \text{ mm}^2$  respectively ( $p < 0.01$ ).

**Conclusion:** Thus, calcified aortic tissue has a higher number of neutrophils and macrophages, which may affect the risk of aortic wall rupture.

#### E-PS-03-014

##### What histologic differences exists between primary or secondary dilative cardiomyopathy?

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**Background & objectives:** Dilative cardiomyopathy (DCM) represents a myocardial structural disorders associated with mechanical dysfunctions and rhythm disturbances that causes enlargement of both ventricles. More than 50% of primary DCM are familial diseases and identifying those forms is essential for discovering asymptomatic patients.

**Methods:** We included in our study 353 dead patients with DCM for a period of 3 years. We eliminated all secondary known cases of DCM. At autopsy, the heart was measured and trimmed by four-chamber view or

short axis (bread loafing) slicing technique. Histology assessments were made using paraffin embedding and slides were stained routinely and with special enzymes.

**Results:** Primary DCM was suspected in 55 patients and those family members were advised to have regular cardiologic examinations and genetic assays. At autopsy, patient's heart with DCM has an increased weight with globular shape and decreased tonus. In endocardium fibrous thickening starts mainly in the septum of left ventricle affecting trabecular muscles. Histology revealed different degrees of myocyte enlargement, “box-car” nuclei and protruding collagenous fibres arranged diffuse or perivascular. Majority of myocytes exhibit degenerative brown pigment (lipofuscin) and in interstitial space we found moderate cellularity represented by fibroblasts, fibrocytes and lymphocytes. Comparing slides from patients with primary and secondary DCM there were insufficient data useful for distinguish these two entities.

**Conclusion:** Primary DCM is proposed to be included in “cytoskeletoopathies” and without cardio-pulmonary transplant, these patients have an ominous prognosis with reduced 5-year survival rate. A good correlation was found between clinical or functional status and the extent of microscopic lesions (expressed mainly by interstitial fibrosis). An early detection of DCM and proper treatment can improve quality of life in these patients. Histology alone is not useful for differential diagnosis.

#### E-PS-04 Cytopathology

#### E-PS-04-001

##### Diagnostic accuracy of rapid onsite evaluation of retroperitoneal masses

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**Background & objectives:** Various mass lesions can arise in retroperitoneum. ROSE determines adequacy of material obtained for cytological analysis on site and can provide insight into the nature of mass. Aim of this study is to determine diagnostic accuracy of ROSE of retroperitoneal masses.

**Methods:** A cross sectional study was conducted in King Edward Medical University/ Mayo Hospital, Lahore, Pakistan. 77 patients with retroperitoneal masses were subjected to ROSE and histopathology of radiologically guided biopsy. Adequacy of cellularity of material obtained for cytology was analysed and reported by pathologist in the radiology suite. Keeping histopathological diagnoses as gold standard, diagnostic accuracy of ROSE was established.

**Results:** Overall diagnostic accuracy of rapid onsite evaluation technique was found to be 75 % in our setup. Majority of lesions were positive for malignant cells and most of these were of lymphoid origin. Remaining cases were benign and of variable morphology.

**Conclusion:** ROSE of retroperitoneal masses will help in improving the adequacy rate, diagnostic yield and accuracy of procedure thus saving time and resources of both patients and physicians. A preliminary diagnosis made on the basis of ROSE may help physicians.

#### E-PS-04-002

##### Positive peritoneal cytology in endometrial cancer: report of a case presenting with ascites

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**Background & objectives:** Endometrial cancer (EC) is the most common gynaecological malignancy. Patients' symptoms may vary from