



ANATOMOPATHOLOGICAL CLINICAL ROUND

Cosme Argerich Hospital
Cardiology Division

- Clinical round: G.M.J.
- Gender: Female
- Age: 74 years old

Date of admittance: 25/3/07

Date of death: 25/3/07

- **Reason to be admitted:** Referred from the Rivadavia Hospital (City of Buenos Aires) for rescue angioplasty.
- **Current disease:** 74-year-old patient who started on March 24th at 20 hrs with prolonged precordial pain in rest, and irradiation to the left arm. The next day she calls the Emergency Service at 8 hrs and is evaluated at her home, where the symptoms are interpreted as hypoglycemia. Since the symptoms persisted, she went at 13 hrs to the Rivadavia Hospital. In admittance an extensive anterior subepicardial injury is verified plus complete right bundle branch block (CRBBB) and left anterior hemiblock (LAHB). She received thrombolytic treatment with streptokinase, one hour later displaying clinical syndrome of negative reperfusion. For this reason, it is decided to refer her to this center for rescue angioplasty (PTCA).

Onset of pain	24/3/07	20 Hrs.
Goes to Rivadavia Hospital	25/3/07	13 Hrs.
Door-to-needle time		3 Hrs. 30 min.
Admittance Argerich Htal.	25/3/07	18 Hrs. 30 min.
Door-to-balloon time	Rivadavia – Argerich	6 Hrs. 5 min.
Time window		23 Hrs. 5 min.

- **Coronary risk factors**
- Diabetes Mellitus type II. (5-year evolution, requiring insulin).
- Post menopausal.
- Smoker.

Physical examination

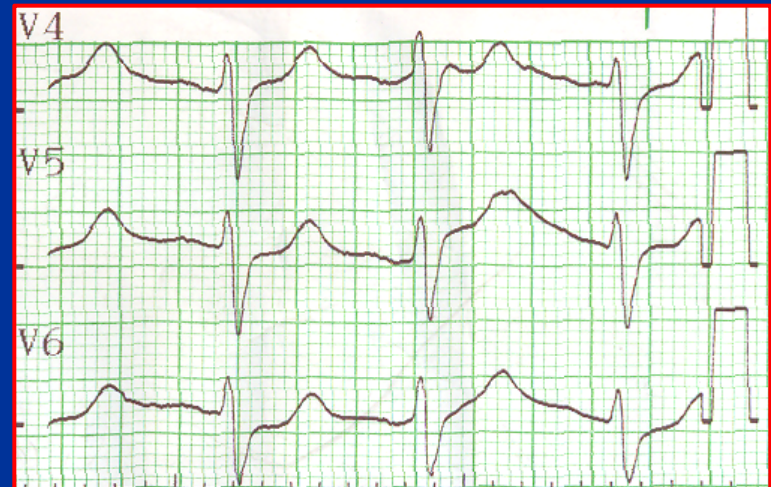
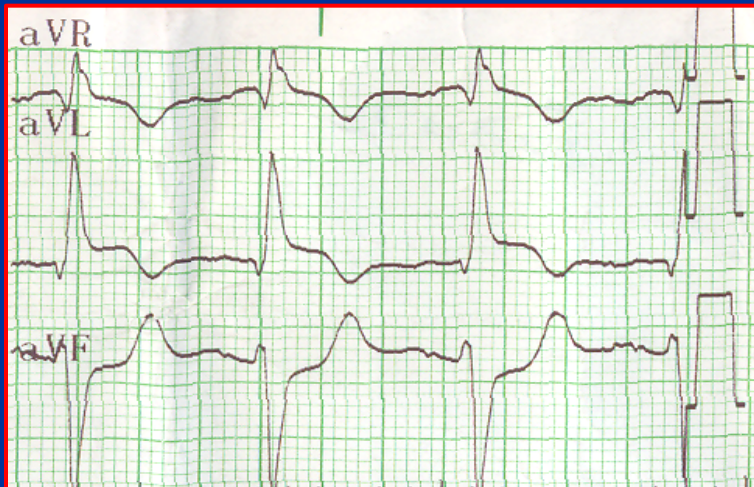
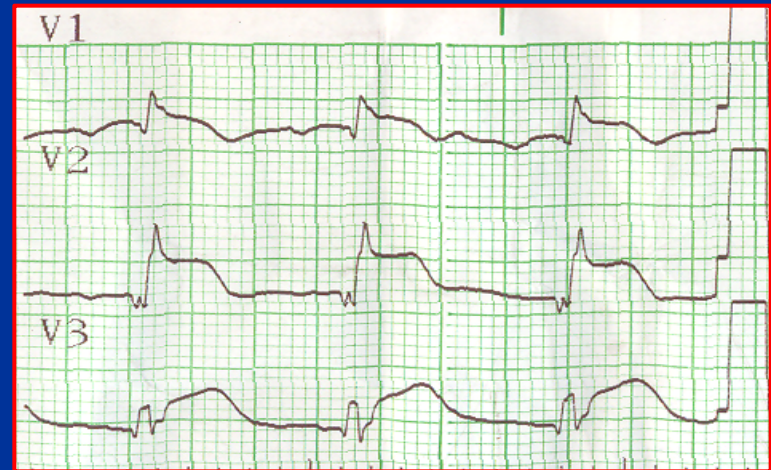
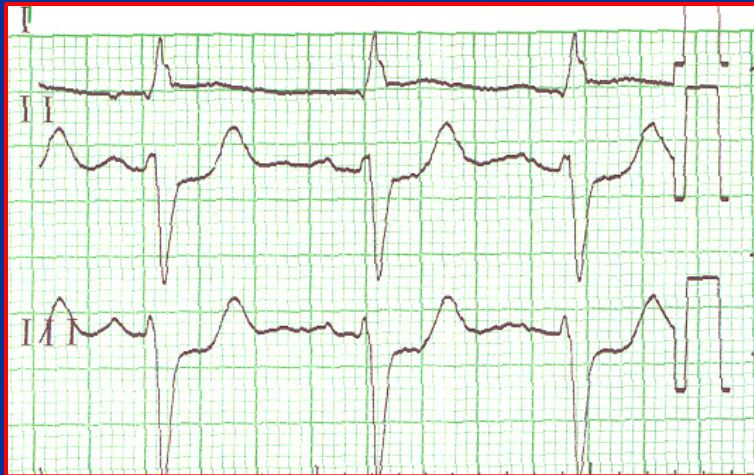
BP: 120/70 mmHg **HR:** 95 bpm **RF:** 22 cpm **T°:** 36,5 °C

- **CV:** Good peripheral perfusion. Jugular ingurgitation 1/3. No hepatojugular reflux. S1 and S2 in 4 foci. No murmurs.
- **Respiratory:** Regular ventilation mechanics, crepitations up to bilateral middle fields.
- **Abdomen:** Soft, non-tender, painless, no palpable visceromegaly, bowel sounds present.
- **CNS:** Lucid, no signs of neurologic deficit.

G.M.

74 y.o.

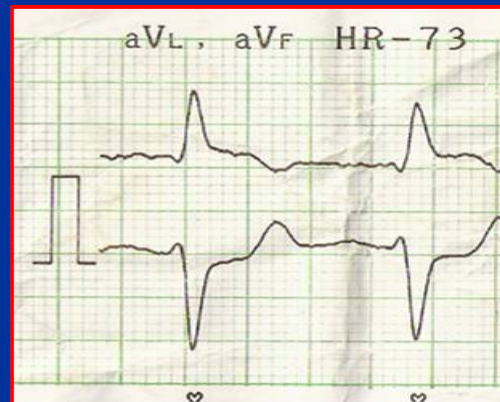
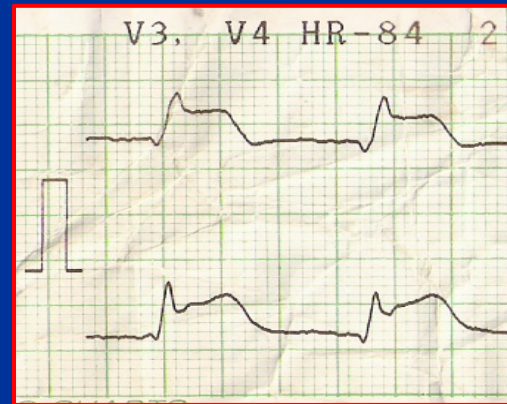
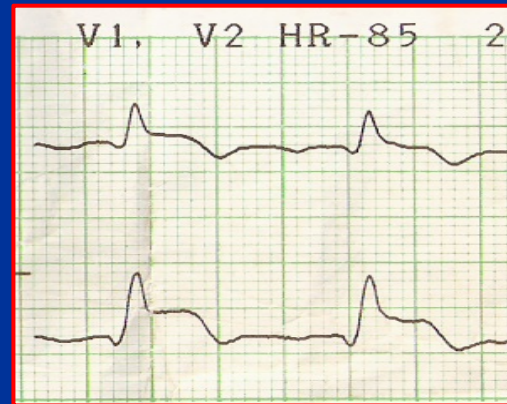
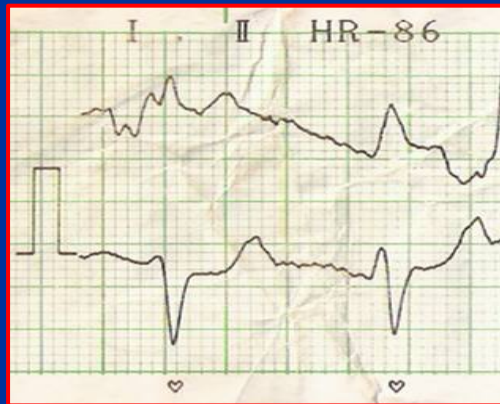
Referral ECG



G.M.

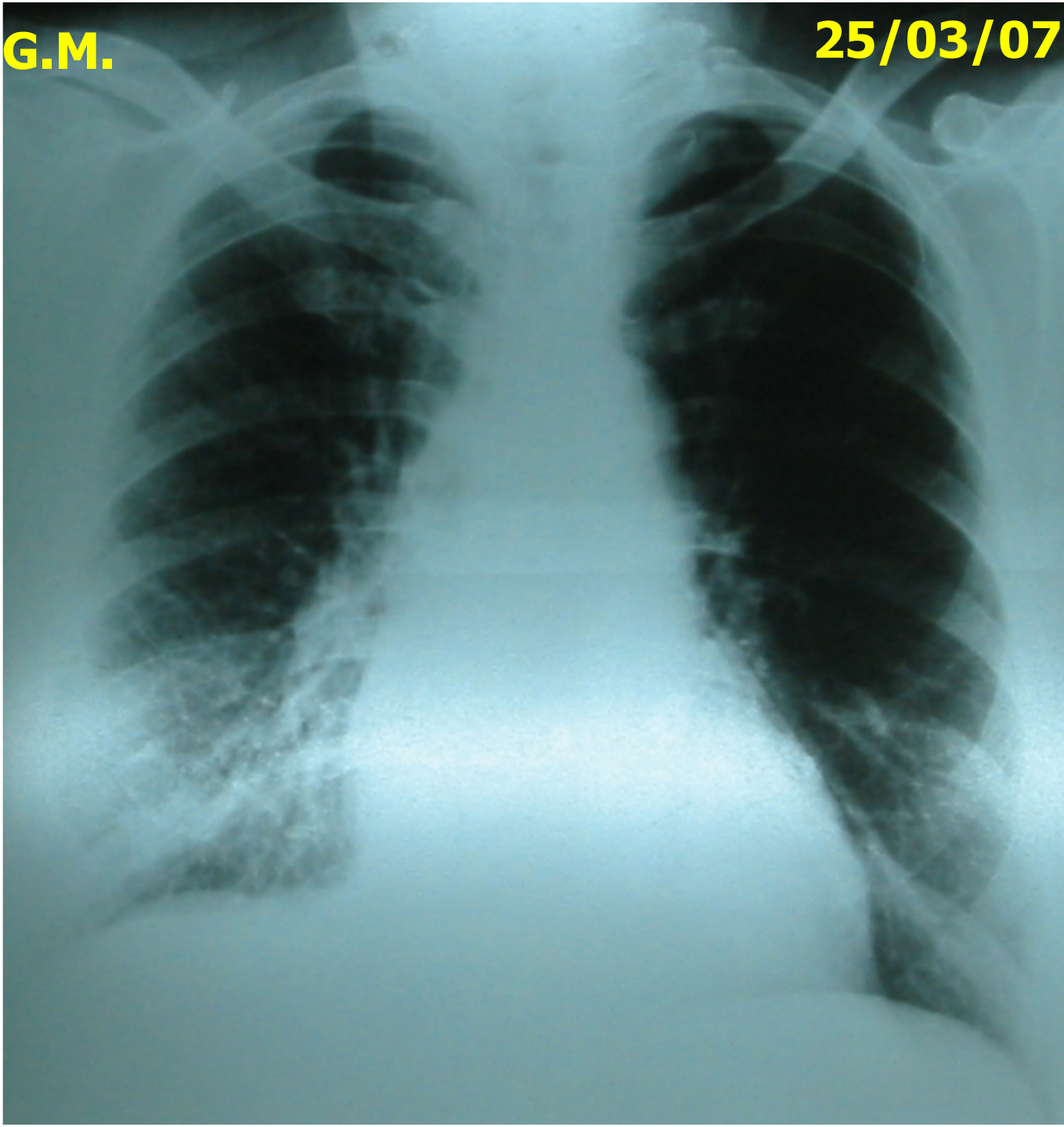
74 y.o.

Admittance ECG



G.M.

25/03/07



Evolution

- She is admitted into the hemodynamics lab at 18.30 hrs (window of 22 hrs. 30 min.) with 10/10 pain and signs of heart failure (KCC of Killip class). Coronary angiography is performed, with evidence of subocclusive lesion (99%) in the proximal third of ADA. Rescue PTCA is performed, which fails (TIMI II).
- She evolves with cardiogenic shock, requiring high doses of inotropic agents (dopamine and noradrenaline), mechanical respiratory assistance and intra-aortic balloon pump counterpulsation.
- At 21.05 hrs she presents cardiorespiratory arrest in a setting of electric activity without pulse without response to advanced resuscitation maneuvers. Death is verified at 21.35 hrs.

Supplementary tests

- **Coronary angiography:**

Ostium and trunk without significant lesions.

Subocclusive lesion (99%) in proximal third of aDA. In the middle third there was another significant segmentary lesion (90%).

70% lesion in circumflex artery. Dominant right coronary artery. No significant lesions.

Left ventriculography in RAO: severely increased end-diastolic volume and end-systolic volume. Anteromedial, anteroapical, apical, inferoapical, and inferomedial akinesia. Severe impairment of ventricular function.

Lab

	25/3/07
Hematocrit	43%
White cells	15.800/mm ³
Platelets	234.000/mm ³
Glycemia	2.37 mg/dL
Urea	33 mg%
CK	1060
CK MB	256
PT/KPTT	99% / 32 sec

Lab

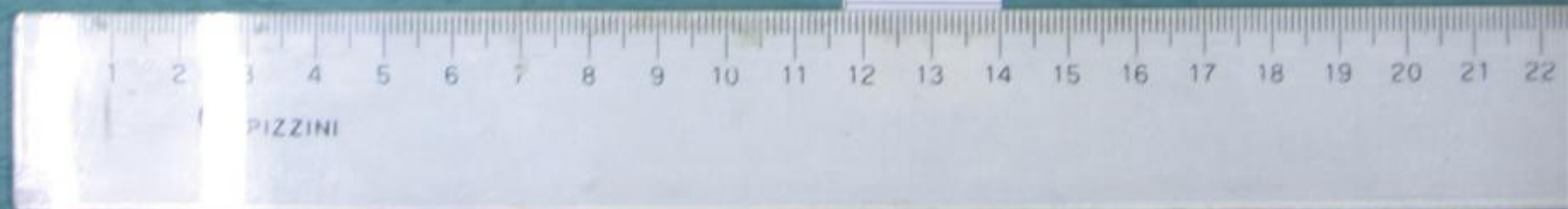
	25/3/07
pH	7.40
PCO ₂	32.8 mmHg
PO ₂	52.1 mmHg
HCO ₃	20.9 mmol/L
BE	-2.1 mmol/L
Sat%	87.7%
Na+	137 mEq/L
K+	4.8 mEq/L
Cl-	100 mEq/L

Metabolic acidosis with increased GAP (17) plus respiratory alkalosis.

AUTOPSY 06/07
HEART

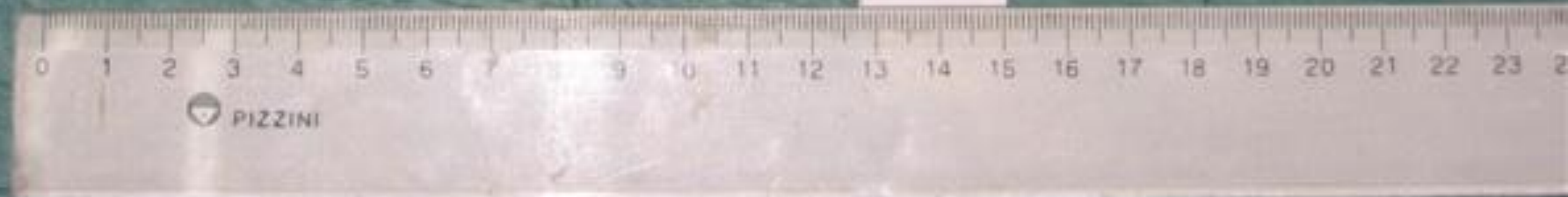


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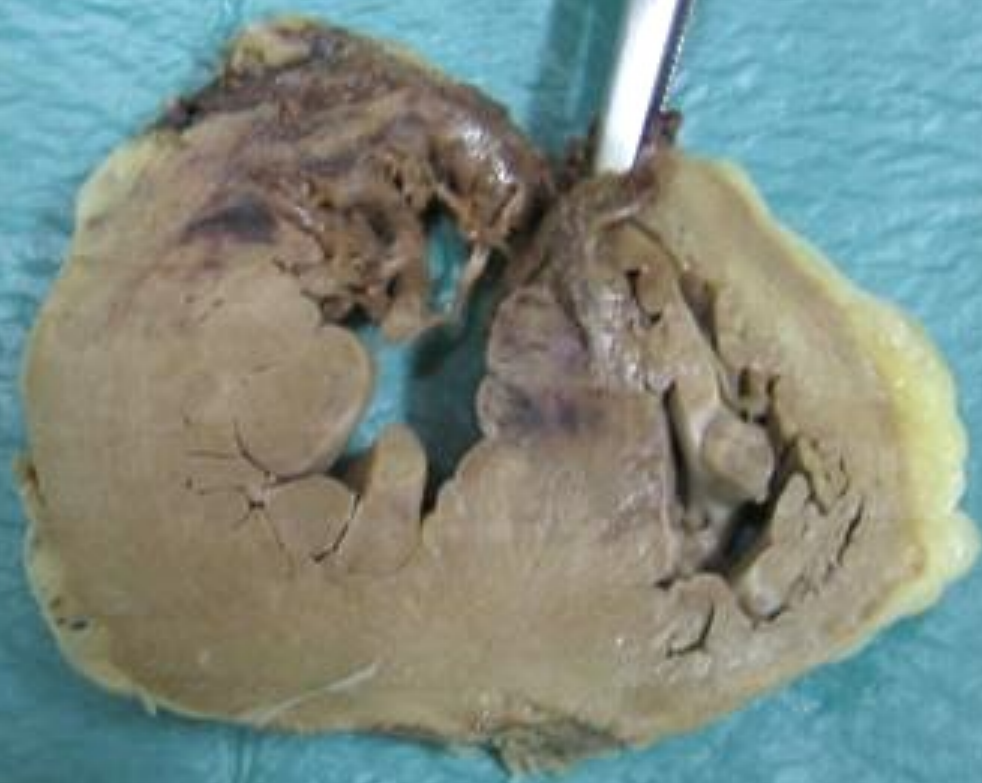
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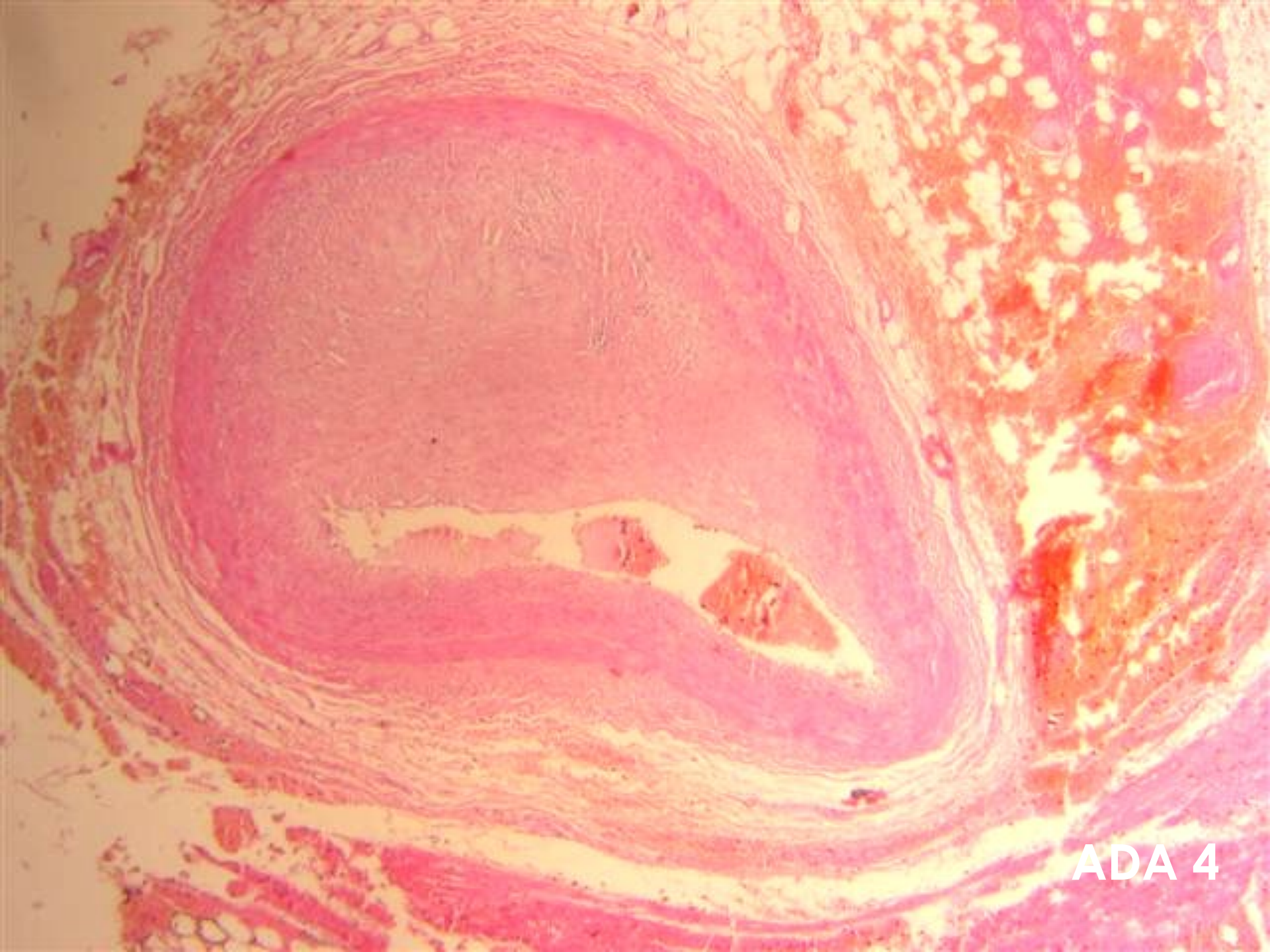
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AUTOPSY 06/07
CORONARY ARTERIES



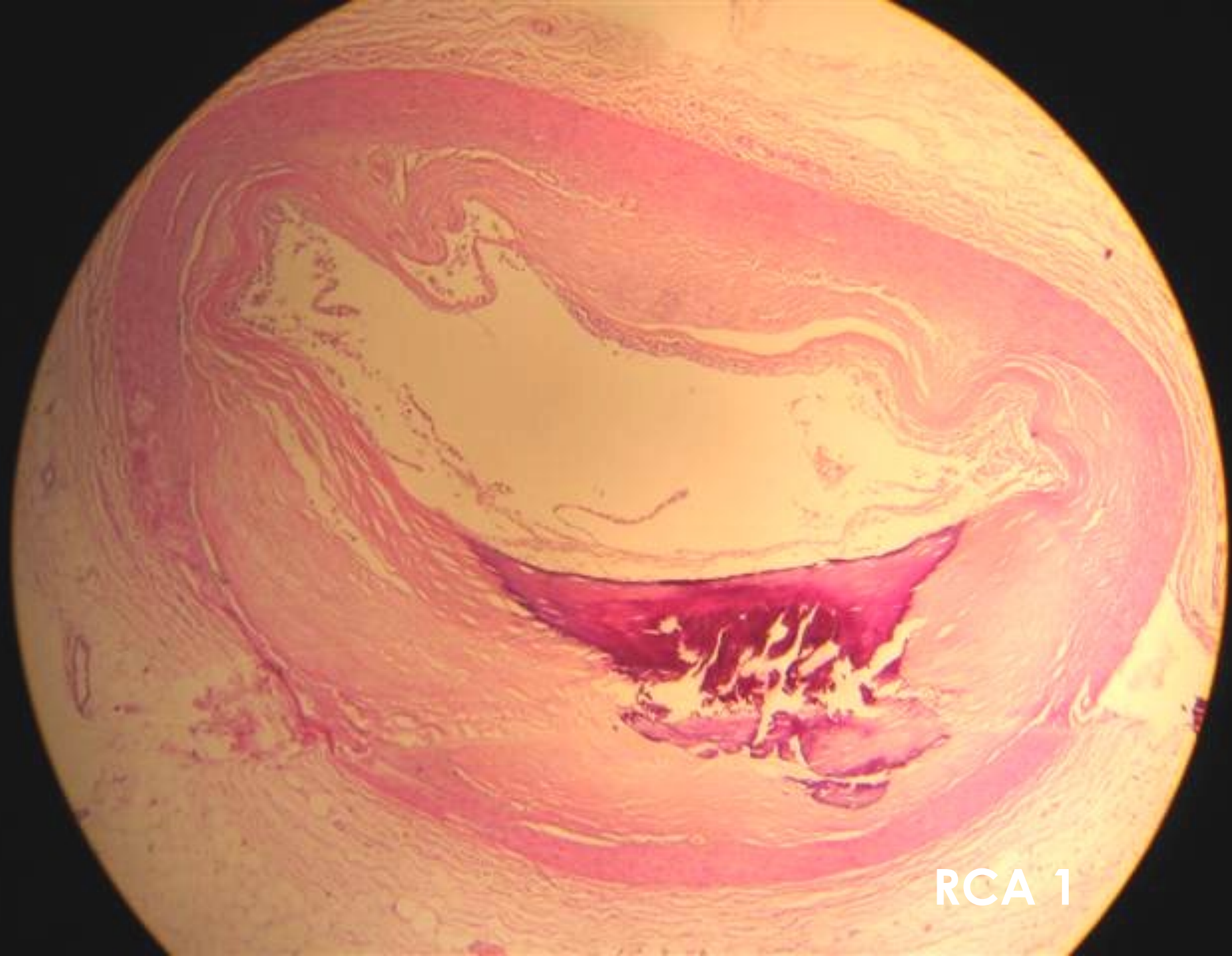
Left
coronary
artery
trunk



ADA 4



Cx 3



RCA 1

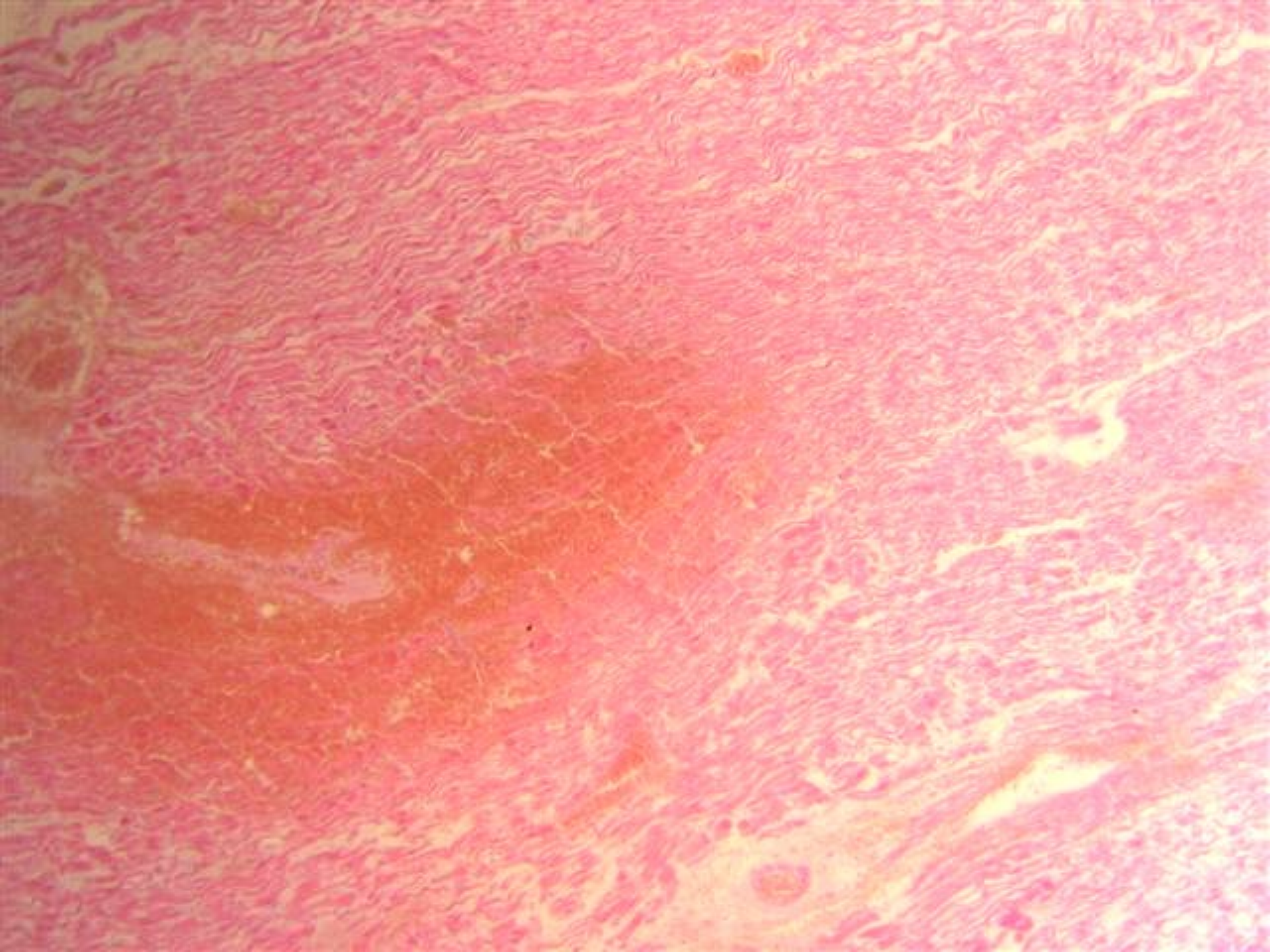
Microscopic findings

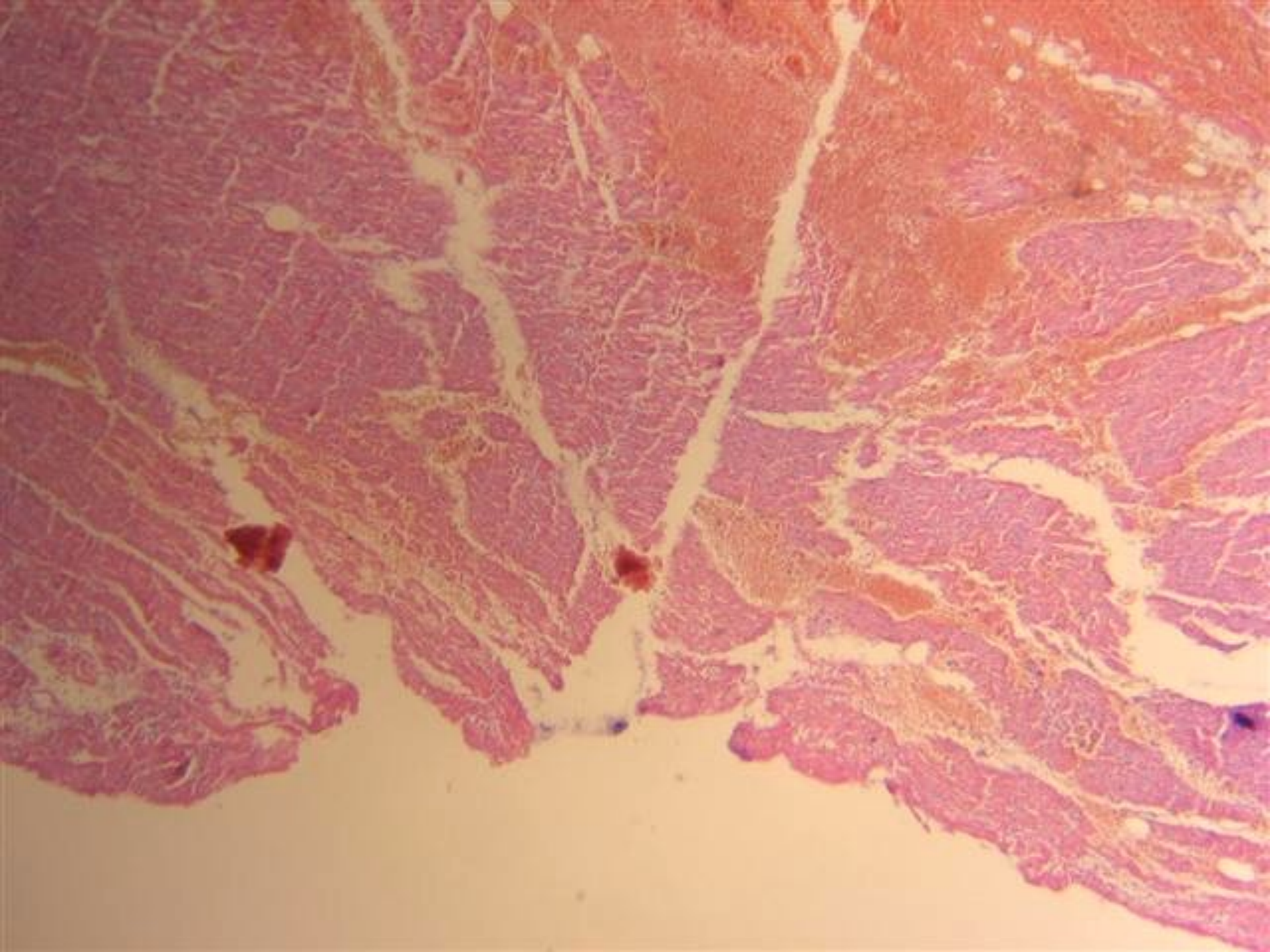
Coronary arteries

Significant atherosclerotic CAD of LCA trunk and ADA.

- **LCA trunk: 40% occlusion**
- **ADA: 80% occlusion in 1st cm.**
- **Cx: occlusion up to 70% in 3rd cm.**
- **RCA: occlusion up to 50% in 1st cm.**
- **All coronary arteries showed calcified fibrous lesions with small subendothelial atheromatous cores and marked lymphocyte infiltration (plaque instability).**

AUTOPSY 06/07
MYOCARDIUM



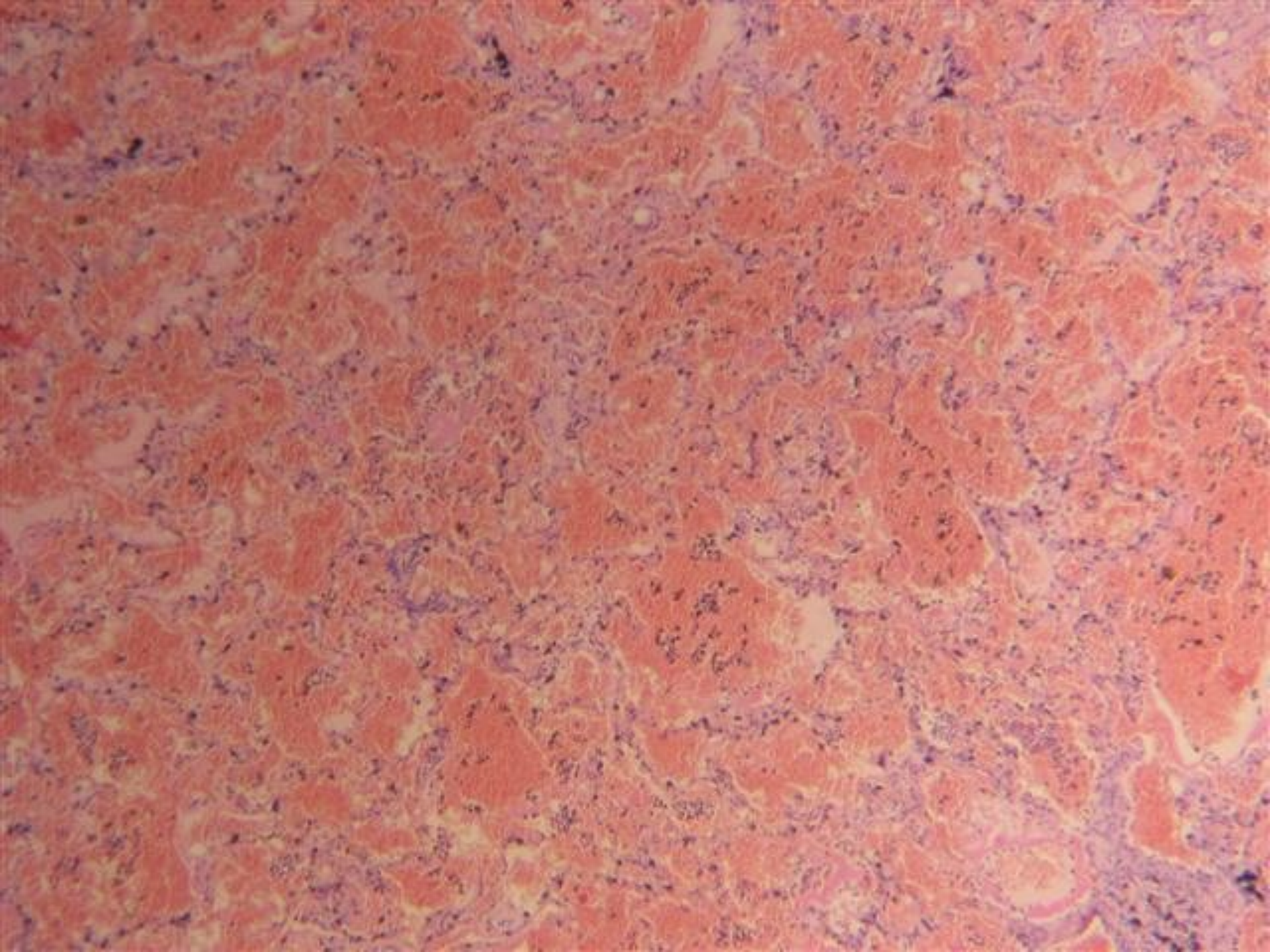


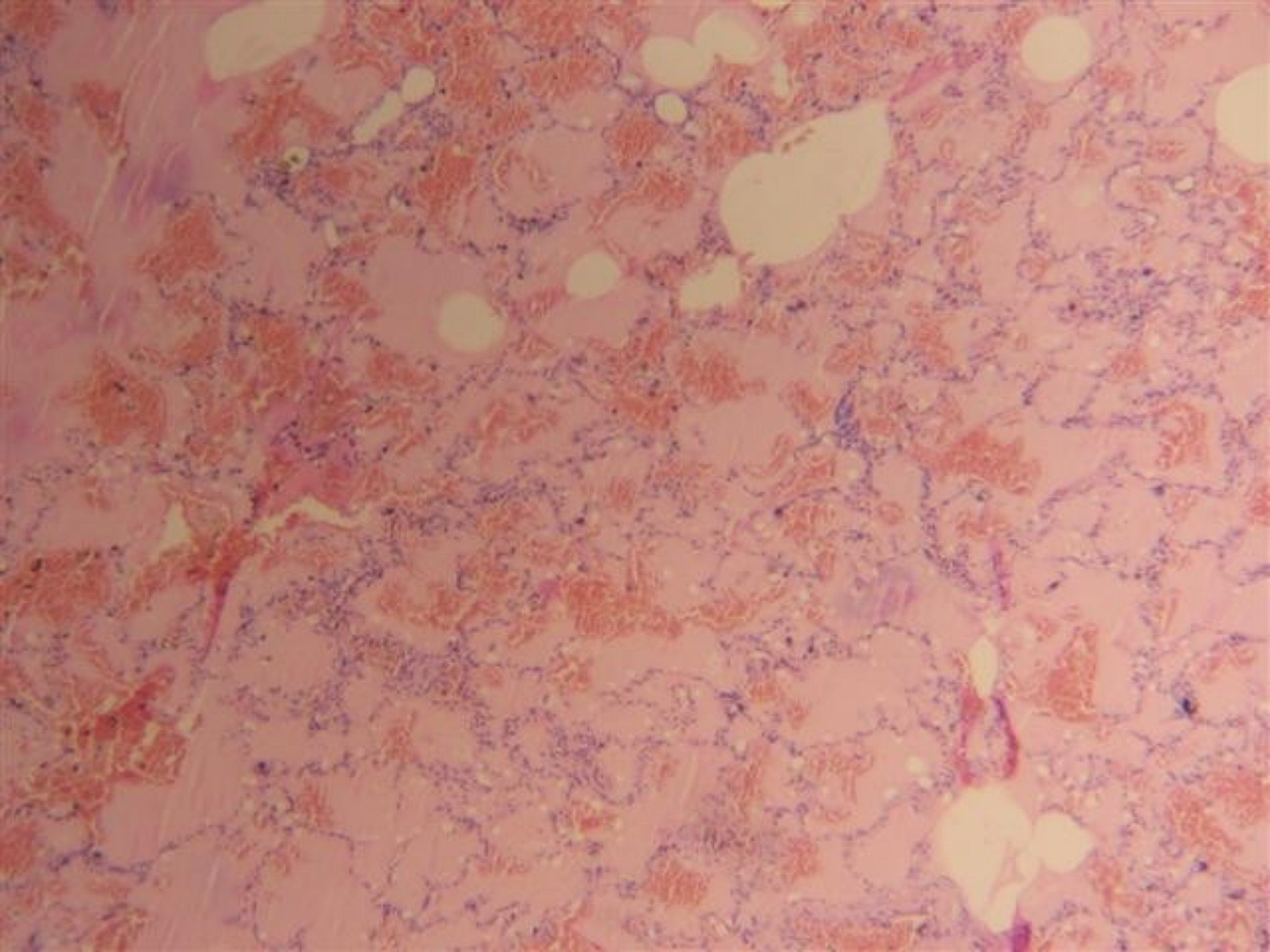
Microscopic findings

Cardiovascular system

- Recent anteroseptal AMI of at least 12-hour evolution, complicated with perforation in the wall joining the septum to the anterior side.
- Bleeding in visceral pericardium without rupture.
- LV hypertrophy.

AUTOPSY 06/07
RESPIRATORY SYSTEM





Microscopic findings

Respiratory system

- Congestion, edema, bleeding and incipient leukocytary afflux (bilateral bronchopneumonia).
- Vascular sclerosis.
- Areas of emphysema.