

**COLLEGE OF  
FORENSIC PATHOLOGISTS  
OF SRI LANKA**



**PROCEEDINGS & ABSTRACTS**

**16<sup>th</sup> ANNUAL ACADEMIC SESSIONS**

**“Exploring the Past and Professional Upliftment”**

**Grand Monarch Hotel Thalawathugoda  
23<sup>rd</sup> & 24<sup>th</sup> November 2017**

## Op 16

### Acute myocardial infarction following blunt chest trauma- the need for second-line investigations in medico legal practice

Raveendran S<sup>1</sup>Hulathduwa SR<sup>2</sup>

<sup>1</sup>MD Trainee, <sup>2</sup>Senior Lecturer, Department of Forensic Medicine, Faculty of Medical Sciences, University of Sri Jayawardenapura, Sri Lanka

#### Introduction

Among non-atherosclerotic etiologies of acute myocardial infarction (MI) in young adults, blunt chest trauma is one of the rare mechanisms. Blunt chest trauma may be due to road traffic accidents, sports activities including rugby and assaults specially stamping over the chest. The possible mechanisms related to trauma and cardiac deaths are coronary artery dissection, intimal tear, sub-intimal hemorrhage, intra-luminal thrombosis and spasm. Sudden cardiac death following trauma may also be due to cardiac concussion, commotio cordis, contusio cordis and catecholamine induced events in a patient with atherosclerotic coronary vessel disease.

#### Case report

A 35 year old man without any past medical history and coronary risk factors was admitted to the accident service unit following road traffic accident. The history revealed that he was hit by a van while he was riding his motor bike. Examination revealed tenderness and contusion on thoraco-abdominal region. His blood pressure was 120/70 mmHg. Other vital signs were within the normal range. Initial ECG showed right bundle branch block and repeated ECG revealed ST elevation in leads V<sub>2</sub> to V<sub>6</sub>. Troponin T was 50ng/ml and five days later it was 18ng/ml. The initial chest x-ray, CT scan of the brain and FAST scan were normal. ECHO cardiogram revealed that hypokinesia in anterior, apical and septal areas. Streptokinase was not given due to the risk of bleeding. Coronary angiogram was not done. He was treated with low molecular weight enoxaparin, clopidogrel, Aspirin and statins. Recovery was uneventful.

#### Conclusion

Atherosclerotic origin of the MI cannot be ruled out completely in this case as angiography has not been performed. Yet, there is a very high possibility that the acute coronary event in this person was triggered following blunt trauma to chest. Proving non-atherosclerotic origin of the MI has a therapeutic value in the long term follow-up as well as a medico-legal value when forensic issues such as category of hurt and compensation are considered.

Keywords: blunt chest trauma, myocardial infarction, road traffic accident, coronary angiogram

## PP 19

Delayed death following percutaneous coronary stent insertion in a young patient with acute myocardial infarction – A case report

Raveendran S<sup>1</sup> Hulathduwa S R<sup>2</sup>

<sup>1</sup>MD Trainee, <sup>2</sup>Senior Lecturer, Department of Forensic Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

### Introduction

Insertion of coronary stents is a life-saving measure in selected cardiac conditions including significant atherosclerotic occlusion of coronaries. Rare complications of this procedure such as re-stenosis, thrombosis, anaphylaxis, coronary spasm, rupture, bleeding and arrhythmias may prove to be fatal occasionally.

### Case Report

Thirty five year old hypertensive male for the last seven years, yet not on regular treatment, a chain-smoker for seventeen years; was admitted to coronary care unit with classical ischaemic chest pain. He was an asthmatic with numerous food allergies. A diagnosis of acute anterior myocardial infarction was made. Coronary angiography revealed total occlusion of the mid segment of the left anterior descending branch which was corrected by insertion of a metal stent. Three days following uneventful surgery he was discharged on anti-anginals and statins. On the fourth day he again developed a severe chest pain and collapsed at home to be pronounced dead on admission. The family members of the deceased, public and the media made a strong allegation against the hospital authorities and the health care system of the country in general for using a poor-quality dye for angiography which they thought to have induced an allergic reaction in him causing his death. The autopsy revealed a 33 x 3 mm metal stent placed within anterior descending artery. The lumen of the stent was completely occluded with a dark thrombus. Other coronary arteries too had moderate atheromatous narrowing. The myocardium revealed yellowish area of necrosis on anterior wall and fresh haemorrhagic area on antero-lateral and septal segments. The weight of the heart was 400g and the thickness of the left ventricle was 1.8cm. The cause of death was given as myocardial infarction following acute coronary thrombosis in a patient who had undergone recent angiography and coronary-stenting following an acute coronary event.

### Conclusion

This case report reiterates the importance of high dose of anti platelet treatment and adequate inward follow-up after percutaneous stent insertion.

Key words: hypertension, coronary stent, acute myocardial infarction, thromboembolism

Unexpected death of a young female following mild headache

Sanjeewa HKR<sup>1</sup>, Hulathduwa SR<sup>2</sup>,

<sup>1</sup>Senior Registrar, <sup>2</sup>Senior Lecturer, Dept. of Forensic Medicine, Faculty of Medical Sciences, University of Sri Jayawardenepure, Sri Lanka

Keywords: colloid cyst, sudden death, headache

**Introduction**

There are several causes for sudden deaths associated with headache. A colloid cyst of the third ventricle is one such rare cause usually reported in children and young adults. Case prevalence is three persons per million per year. The clinical presentation may vary from intermittent headache to non-specific symptoms and rarely sudden death. Colloid cysts are usually diagnosed by Magnetic Resonance Imaging (MRI) or Computed Tomography (CT).

**Case Report**

A 22 year old unmarried female suffered from intermittent headache over four years. As the symptoms were mild in the initial stage, she self-medicated with common analgesics. As the frequency and severity of symptoms continued to increase, she consulted several general practitioners and physicians most of whom have made the provisional diagnosis of either migraine or sinusitis. No investigations were carried out other than a plain X-ray of the skull (sinus view) and no ophthalmological examination was done. She presented with severe headache and semi-conscious state at the local hospital where she died before any investigation or transfer to a tertiary care hospital was arranged. A brownish-yellow colloidal cyst of the third ventricle was found. The ventricular system was grossly dilated with surrounding cerebral oedema. Other internal organs were unremarkable except for mild bilateral pulmonary edema. Histological examination was consistent with colloid cyst. Toxicological analysis was negative.

**Conclusion**

This case elaborates the importance of paying due attention even to the extremely rare differential possibilities when they prove to be fatal if not diagnosed on time. This includes high level of clinical suspicion, adequate attention to detail, proper clinical examination and carrying out adequate investigations. It is also necessary to build up a culture where there is clinico-pathological co-relation in case of possible "miss-outs" in the clinical diagnosis in order to prevent similar adverse outcomes in the future.

Death due to late complications of maxillary sinus fracture

Kogulshankar M<sup>1</sup>, Hulatuduwa SR<sup>2</sup>

<sup>1</sup>Registrar, <sup>2</sup>Senior Lecturer, Dept. of Forensic Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepure, Sri Lanka

**Introduction**

The danger triangle of the face consists of the area from the corners of the mouth to the bridge of the nose, including the nose and maxilla. Due to the special nature of its blood supply, retrograde infections from the nasal area could spread to the brain causing cavernous sinus thrombosis, meningitis or brain abscess formation mainly on the ventral aspects of the frontal lobes.

**Case Report**

A 79-year-old alcoholic male was admitted to the accident service unit with blunt trauma to head and face following a road traffic accident. He was diagnosed of having fractures of maxillary bone and frontal sinuses associated with frontal lobe cerebral contusions. CT scan showed fluid levels in bilateral maxillary sinuses. He was treated with IV anti-biotics for two weeks in the ward. He was asked to make himself present at the surgical clinic one week following discharge and was put on oral anti-biotics to be taken regularly at home. The patient defaulted oral anti-biotics following discharge and did not come to the surgical clinic for review after one week. Two weeks later he was admitted with a history of high fever spikes, chills, rigors, severe headache, vomiting and bouts of clouding of consciousness for three to four days. On admission he appeared drowsy though the Glasgow Coma Scale was 15/15. Full blood count showed marked neutrophil leukocytosis. CT scan of the head, lumbar puncture, baseline haematological investigations and blood cultures were arranged though he succumbed to death within three hours of admission. An inquest was requested which was followed by a medico-legal autopsy which revealed healing fractures of frontal and maxillary sinuses. The brain was congested and the fronto-parietal surfaces were covered with a thick layer of pus. Some internal organs such as the spleen and kidneys too had early septic features.

**Conclusion**

Though prompt and proper treatment had been received by the patient initially and the adequate follow-up measures had been taken upon discharge, the poor compliance of the patient to medical advice had resulted in a death otherwise preventable.

**Keywords:** *danger triangle of face, maxillary sinus fracture, meningitis*

## Unexpected delayed death following percutaneous coronary stent insertion in a young patient with acute myocardial infarction

Raveendran S<sup>1</sup>Hulathduwa S R<sup>2</sup>

<sup>1</sup>MD Trainee, <sup>2</sup>Senior Lecturer, Department of Forensic Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepura, Sri Lanka

**Key words:** *hypertension, coronary stent, acute myocardial infarction, thromboembolism*

### Introduction

Insertion of coronary stents is a life-saving measure in selected cardiac conditions including significant atherosclerotic occlusion of coronaries. Rare complications of this procedure such as re-stenosis, thrombosis, anaphylaxis, coronary spasm, rupture, bleeding and arrhythmias may prove to be fatal occasionally.

### Case Report

Thirty five year old hypertensive male for the last seven years, yet not on regular treatment, a chain-smoker for seventeen years; was admitted to coronary care unit with classical ischemic chest pain. He was an asthmatic with numerous food allergies. A diagnosis of acute anterior myocardial infarction was made. Coronary angiography revealed total occlusion of the mid segment of the left anterior descending branch which was corrected by insertion of a metal stent (**Figure 01**). Three days following uneventful surgery he was discharged on anti-anginals and statins. On the fourth day he again developed a severe chest pain and collapsed at home to be pronounced dead on admission. The family members of the deceased, public and the media made a strong allegation against the hospital authorities and the health care system of the country in general for using a poor-quality dye for angiography which they thought to have induced an allergic reaction in him causing his

death. The autopsy revealed a 33 x 3 mm metal stent placed within anterior descending artery. The lumen of the stent was completely occluded with a dark thrombus. Other coronary arteries too had moderate atheromatous narrowing. The myocardium revealed yellowish area of necrosis on anterior wall and fresh haemorrhagic area on antero-lateral and septal segments (**Figure 02**). The weight of the heart was 400g and the thickness of the left ventricle was 1.8cm. The cause of death was given as myocardial infarction following acute coronary thrombosis in a patient who had undergone recent angiography and coronary-stenting following an acute coronary event.

### Conclusion

Allegations of allergy and stent-induced vasospasm were able to be excluded safely due to the absence of favouring evidence in the medical records and autopsy and presence of more specific findings attributable to his death. Such reactions occur within the first 24hrs of the procedure. Re-stenosis of the stent needs few months minimally. This casereport reiterates the importance of high dose of anti platelet treatment and adequate inward follow-up after percutaneous stent insertion.

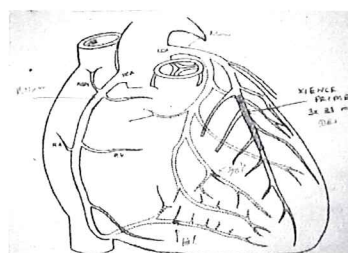


Figure 01

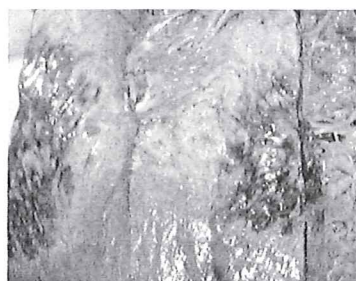


Figure 02

# Death due to late complications of maxillary sinus fracture

Kogulshankar M<sup>1</sup>, Hulatuduwa SR<sup>2</sup>

<sup>1</sup>Registrar, <sup>2</sup>Senior Lecturer, Dept. of Forensic Medicine, Faculty of Medical Sciences, University of Sri Jayewardenepure, Sri Lanka

**Keywords:** *danger triangle of face, maxillary sinus fracture, meningitis*

## Introduction

The danger triangle of the face consists of the area from the corners of the mouth to the bridge of the nose, including the nose and maxilla. Due to the special nature of its blood supply, retrograde infections from the nasal area could spread to the brain causing cavernous sinus thrombosis, meningitis or brain abscess formation mainly on the ventral aspects of the frontal lobes.

## Case Report

A 79 year old alcoholic male was admitted to the accident service unit with blunt trauma to head and face following a road traffic accident. He was diagnosed of having fractures of maxillary bone and frontal sinuses associated with frontal lobe cerebral contusions. CT scan showed fluid levels in bilateral maxillary sinuses. He was treated with IV anti-biotics for two weeks in the ward. He was asked to make himself present at the surgical clinic one week following discharge and was put on oral anti-biotics to be taken regularly at home. The patient defaulted oral anti-biotics following discharge and did not come to the surgical clinic for review after one week. Two weeks later he was admitted with a history of high fever spikes, chills, rigors, severe headache, vomiting and bouts of clouding of consciousness for three to four days. On admission he appeared drowsy though the Glasgow Coma Scale was 15/15. Full blood count showed marked neutrophil leukocytosis. CT scan of the head, lumbar puncture, baseline haematological investigations and blood cultures were arranged though he succumbed to death within three hours of admission. An inquest was requested which was followed by a medico-legal autopsy which revealed healing fractures of frontal and maxillary sinuses. The brain was congested and the fronto-parietal surfaces were covered with a thick layer of pus. Some internal organs such as the spleen and kidneys too had early septic features.

## Conclusion

Though prompt and proper treatment had been received by the patient initially and the adequate follow-up measures had been taken upon discharge, the poor compliance of the patient to medical advice had resulted in the preventable death.

