Scottish Parliament Region: North East Scotland

Case 200603606: A Medical Practice, Grampian NHS Board

Summary of Investigation

Category

Health: General Practice: Pulmonary embolism

Overview

The complainant (Ms C) raised concerns that a GP Practice (the Practice) had failed to diagnose her brother (Mr A) with deep vein thrombosis (DVT) or subsequent pulmonary embolism.

Specific complaint and conclusion

The complaint which has been investigated is that the Practice failed to diagnose Mr A with DVT or subsequent pulmonary embolism (*upheld*).

Redress and recommendations

The Ombudsman recommends that the Practice:

(i) review the circumstances of this case and consider whether any lessons can be learned for the future management of young adults with chest symptoms;

(ii) apologise to Mr A's family for the poor management of Mr A's pulmonary embolism; and

(iii) review their clinical record-keeping practice.

The Practice has accepted the recommendations and will act on them accordingly.

Main Investigation Report

Introduction

1. The aggrieved (Mr A) died on 21 November 2006 aged 34. His death certificate gave his cause of death as pulmonary thrombo-embolism and deep vein thrombosis (DVT) of the legs. On 30 November 2006 Mr A's sister (Ms C) and mother (Mrs B) attended a meeting with the manager (the Practice Manager) of the GP Practice (the Practice) to explain their complaints. The Practice Manager explained that she had not yet received the post-mortem results and would require further time to look into matters. On 7 December 2006, the Practice Manager wrote to Mrs B to inform her that the complaint was being investigated. On 18 December 2006, the Practice Manager held another meeting with Ms C, Mrs B and a General Practitioner from the Practice (GP 1) to discuss the complaint. Ms C complained to the Ombudsman on 19 February 2007.

2. The complaint from Ms C which I have investigated is that the Practice failed to diagnose Mr A with DVT or subsequent pulmonary embolism.

Investigation

3. During this investigation, I considered correspondence between Ms C, Mrs B and the Practice. I also took into account a chronology of events produced by Ms C; and the Practice Manager's notes on the Practice's handling of this complaint. I reviewed Mr A's medical records and obtained advice on this complaint from the Ombudsman's medical adviser (the Adviser).

4. I have not included in this report every detail investigated but I am satisfied that no matter of significance has been overlooked. Ms C and the Practice were given an opportunity to comment on a draft of this report.

DVT and pulmonary embolism

5. DVT happens when a blood clot forms in a deep vein. It most commonly happens in the deep veins of the lower leg, and can spread up to the deep veins in the thigh. A pulmonary embolism is a complication of DVT which happens when a piece of the blood clot from a DVT breaks off and travels through the bloodstream to the lungs. In the lungs it can block a pulmonary artery. This can cause chest pain, shortness of breath or coughing up phlegm tinged with blood.

Complaint: The Practice failed to diagnose Mr A with DVT or subsequent pulmonary embolism

6. On 3 November 2006, Mr A attended the Practice complaining of a sore chest and shortness of breath and saw a General Practitioner (GP 2). Mr A also informed GP 2 that he had recently suffered from an upper respiratory tract infection. Ms C told me that GP 2 suggested that Mr A may have hurt himself at work. Mr A's medical notes record that he was reassured.

7. Mr A returned to the Practice on 8 November 2006 and saw GP 2 again. Mr A was still short of breath and had a moist cough with some blood. He was prescribed amoxicillin for a suspected chest infection.

8. On 9 November 2006, Mr A's fiancée found him doubled over in pain and called an ambulance. Mr A was admitted to hospital but was discharged later that evening when his breathing normalised. He was prescribed further amoxicillin and co-dydramol. An electrocardiograph was carried out at the hospital and the results appeared normal.

9. On 13 November 2006, Mr A attended the Practice and saw GP 1 to discuss the fact that he was still coughing up blood and was experiencing chest pains and breathlessness. GP 1 asked Mr A to provide a sputum sample and arranged for a chest x-ray. GP 1 additionally prescribed cough medicine. Mr A had the chest x-ray on the same day. The results of this x-ray showed that Mr A's lungs were clear. The doctor who interpreted the x-ray suggested that there may be an underlying chest infection but that there was also a possibility that Mr A had underlying cardiac disease or pulmonary hypertension. He also suggested that a repeat chest x-ray be carried out approximately two weeks later.

10. On 17 November 2006, GP 1 telephoned a respiratory consultant to discuss Mr A. He was advised that Mr A probably had atypical pneumonia. The Practice provided me with a copy of draft letter referring Mr A to the chest clinic. This letter is handwritten by GP 1 and is dated 17 November 2006. In the letter GP 1 stated that 'one also entertained thoughts of a [pulmonary embolism] but there are no identifiable predisposing factors'. Despite the fact that this letter was marked 'urgent', it was never typed or sent.

11. Mr A attended the Practice again on 20 November 2006. At this stage he was still coughing up blood and experiencing breathlessness and chest pain.

Although she was not present at the consultation, Ms C informed me that Mr A had told GP 1 that he had a loss of sensation and some pain in his leg. This is not recorded in the medical records and, in response to a draft of this report, the Practice stated that Mr A had not reported these symptoms to them. Mr A was prescribed clarithromycin. On 21 November 2006, Mr A collapsed in the early hours of the morning and was pronounced dead.

12. Ms C explained to me that she had researched DVT and that Mr A had a number of the symptoms. She questions why the Practice failed to diagnose Mr A in these circumstances.

13. When Mr A's family met with the Practice Manager and GP 1 on 18 December 2006, GP 1 explained that the pathologist who had carried out the post-mortem (the Pathologist) had sent samples for tests to be carried out for genetic thrombophilia, a condition which gives rise to an increased tendency for excessive clotting of the blood. It took some time for these tests to be conducted.

14. On 27 April 2007, the Pathologist wrote to GP 1. He explained that Mr A had died of a pulmonary thrombo-embolism consequent upon migration of a thrombus from the deep veins of the legs. He explained that, in view of Mr A's age and the apparent lack of precipitating causes, he had pursued the possibility of genetic thrombophilia. He stated that the results of the genetic tests performed provided no evidence for mutations for well recognised thrombophilic conditions. The Pathologist went on to explain that further genetic testing had revealed that Mr A suffered from Klinefelter's Syndrome (a chromosomal abnormality). He stated that those suffering from Klinefelter's Syndrome had been recognised to have a significantly raised incidence of venous thrombosis and pulmonary thrombo-embolism.

15. The Adviser explained that without predisposing factors, DVT and pulmonary embolism are unlikely in a man of Mr A's age. He advised that people with Klinefelter's Syndrome are more likely to have DVT and, therefore, pulmonary emobolism but that it would not be reasonable for every General Practitioner to be aware of this. In any event, GP 1 and GP 2 were not aware that Mr A had Klinefelter's Syndrome and there was no reason for them to be aware of this.

16. The Adviser went on to state that, despite the low probability of Mr A having a DVT and consequent pulmonary embolism, pulmonary embolism should have been part of the differential diagnosis and that the GPs should have put themselves in a position to exclude it. He explained that shortness of breath; pleuritic (sharp or stabbing) chest pain and coughing up blood together make this a possible diagnosis. Although the chest x-ray could have been helpful, it was not. He noted that there was no evidence that GP 1 or GP 2 ever examined Mr A's legs. The Adviser also stated that he was surprised at the advice of the respiratory consultant but that it was not possible to determine what GP 1 had told him about Mr A's condition.

17. The Adviser commented that the draft referral letter of 17 November 2006 was too little too late. By the time it was drafted, Mr A had been suffering from haemoptysis, shortness or breath and chest pain for 2 weeks. In these circumstances, a differential diagnosis of pulmonary embolism should have been made earlier on and, once it had been made, Mr A should have been urgently sent to the hospital for relevant tests to be carried out.

18. The Adviser stated that there was no doubt that the diagnosis of pulmonary embolism was hindered by various factors including the chest x-ray result and the apparently normal electrocardiograph. However, he goes on to say that a reasonable General Practitioner would normally have made this diagnosis at an earlier stage or had a sufficiently high index of suspicion so that Mr A would have been admitted to hospital for further investigation.

(a) Conclusion

19. Although DVT and pulmonary embolism were unlikely in a man of Mr A's age and that the chest x-ray and advice from the respiratory consultant did not provide any evidence that would indicate DVT or pulmonary embolism, Mr A did have symptoms which made pulmonary embolism a possible diagnosis. GP 1 and GP 2 did not consider a diagnosis of pulmonary embolism in this case until 17 November 2006 and, by the time GP 1 had drafted a referral letter, it was too late. The Adviser has indicated that he would expect a reasonable General Practitioner to have made a differential diagnosis of pulmonary embolism earlier on and to have urgently sent Mr A to hospital to have relevant tests carried out. The Practice delayed in making a differential diagnosis of pulmonary embolism. I, therefore, uphold this complaint.

(a) Recommendation

20. The Ombudsman recommends that the Practice review the circumstances of this case and consider whether any lessons can be learned for future management of young adults with chest symptoms. She also recommends that the Practice apologise to Mr A's family for their poor management of Mr A's pulmonary embolism.

Further Recommendations

21. The Adviser commented that the clinical notes in this case were not very detailed and could be considered insufficient. For this reason, the Ombudsman recommends that the Practice review their clinical record-keeping practice.

22. The Practice has accepted the recommendations and will act on them accordingly. The Ombudsman asks that the Practice notify her when the recommendations have been implemented.

Annex 1

Explanation of abbreviations used

Mr A	The aggrieved
DVT	Deep vein thrombosis
Ms C	The complainant
Mrs B	Mr A's mother
The Practice Manager	The manager of the GP Practice
The Practice	The GP Practice
GP 1	A general practitioner from the Practice
The Adviser	The Ombudsman's medical adviser
GP 2	A general practitioner from the Practice
The Pathologist	The pathologist who carried out Mr A's post-mortem examination

Annex 2

Glossary of terms

Amoxicillin	An antibiotic drug
Atypical pneumonia	An acute respiratory disease
Clarithromycin	An antibiotic drug
Co-dydramol	A pain killer
Deep Vein Thrombosis	Blood clotting which occurs within deep-lying veins
Differential diagnosis	The term used by doctors to refer to the various possible causes of a patient's symptoms
Electrocardiograph	A test which records the electrical activity of the heart
Haemoptysis	Coughing up blood
Klinefelter's Syndrome	A chromosomal abnormality in which an extra X chromosome is present in males
Pulmonary embolism	A blood clot from another part of the body that travels to the lungs
Pulmonary hypertension	High blood pressure in the blood vessels of the lungs
Sputum	Mucus coughed up from the lungs
Thrombo-embolism	Obstruction of a blood vessel caused by fragments of a blood clot carried from the site of origin to obstruct another vessel

Thrombophilia	Increased tendency of blood to clot
Thrombus	A blood clot
Venous thrombosis	Blockage in a vein caused by a blood clot