

“Frank’s sign” in a patient with pneumococcal pneumonia

Running title: Ear lobe crease and pneumococcal infection: does a link exist?

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A 71-year-old man, active smoker, was admitted to our Internal Medicine Inpatient Unit because of fever and dyspnoea. He suffered from diabetes mellitus, hypertension and peripheral artery obstructive disease. He had undergone pacemaker implantation because of III-degree AV block in 2009 and radical cystectomy with cystoplasty because of bladder cancer in 2010. His medications included ticlopidine, losartan, insulin-glargine, repaglinide, pentoxifyllin and verapamil.

On clinical examination, a diagonal crease in both earlobes consistent with Frank’s sign was noted (Figure 1).

Chest X-ray and CT-scan (Figure 2) showed a right lower pulmonary lobe consolidation with a urinary assay positive for pneumococcal antigen. Clinical examination and testing were consistent with pneumococcal pneumonia and antibiotic treatment was started. Patient’s clinical conditions rapidly improved and he was discharged home after 7 days.

Frank’s sign has been described as a marker of coronary artery

disease in 1979 [1]. Recently this sign has been shown to be associated with metabolic syndrome [2] and to represent a useful “low-cost screening test” for coronary artery disease [3].

The presence of Frank’s sign in our patient was consistent with his cardiovascular risk factors (older age, diabetes, cigarette smoking, hypertension) and complications (peripheral artery disease, AV-block); where patients affected by chronic heart disease, chronic lung disease, diabetes mellitus and active smokers should be considered at risk for pneumococcal pneumonia and should receive anti-pneumococcal vaccination.

While not link can be established in this particular patient, could Frank’s sign, in presence pulmonary consolidation, alert practitioners for the risk of pneumococcal pneumonia?



Figure 1. Picture showing the ear’s lobe crease (Frank’s sign).

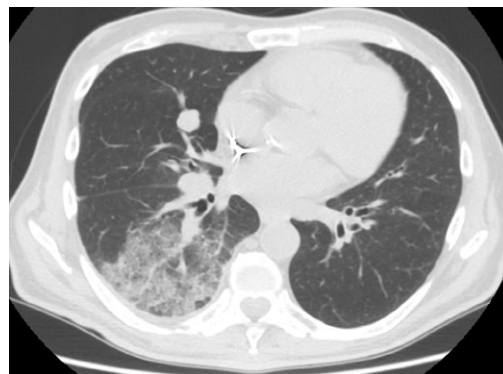


Figure 2. CT scan showing the consolidation in the lower lobe of the right lung.

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Conflict of interest

None.

Informed consent

Obtained from the Patient.

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