P40 IS ROUTINE LIVER FUNCTION TESTING NECESSARY FOR PATIENTS RECEIVING LATENT TUBERCULOSIS TREATMENT?

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10.1136/thorax-2021-BTSabstracts.150

Introduction Tuberculosis was the leading cause of mortality from infectious disease until the covid-19 pandemic. Over a quarter of the world's population is estimated to have latent tuberculosis infection (LTBI), with 5–10% expected to develop active TB. Hepatotoxicity is a well described side-effect of anti-tuberculosis medication, often leading to disruptions in treatment. Currently, NICE guidelines recommend careful liver function test (LFT) monitoring of patients on anti-tuberculosis medication with liver disease, abnormal baseline LFTs or with history of alcohol or hepatotoxic drug misuse. However, there is no specific guidance on LFT monitoring for routine treatment. **Methods** All patients with LTBI in a single centre were identified from hospital records over a 3-year period (January 2018-December 2020). Clinical notes and blood test results were analysed for all patients, identifying any drug induced liver injury (DILI). Frequency and timing of LFT monitoring once starting treatment was reviewed and correlated with patient symptoms.

Results Over a 3-year period, 180 patients received treatment for LTBI. 169 patients (94%) had baseline LFTs measured. 7 patients (3.9%) had deranged LFTs during their treatment, with 3 (1.7%) meeting the criteria for DILI. 2 of the 3 patients (66%) with DILI were symptomatic prompting blood tests, 1 patient (33%) had abnormal baseline LFTs. Of the 7 patients with LFT derangement during treatment, 4 (57%) had deranged baseline LFTs, 4 (57%) were symptomatic. Only 1 patient had neither symptoms nor abnormal baseline LFTs, but had abnormal baseline renal function requiring regular monitoring.

Conclusions These results suggest that risk of DILI is present but relatively low in patients receiving treatment for LTBI. Most patients from this cohort with DILI were either high risk as per NICE guidance or symptomatic prompting LFT checking. Therefore, routine monitoring of LFTs for all patients on LTBI treatment is unlikely to be cost-effective or change treatment outcomes. Instead, LFT monitoring should be considered specifically for patients that are high risk or with symptoms of DILI.

REFERENCES

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P41 PSEUDOMONAS AERUGINOSA: BURDEN, TREATMENT AND OUTCOMES IN A LONG TERM VENTILATION SERVICE

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10.1136/thorax-2021-BTSabstracts.151

Introduction *Pseudomonas aeruginosa* (PA) is a significant respiratory pathogen but is not well described in patients requiring long term ventilation (LTV). Whilst national guidance exists for the management of PA in the bronchiectasis population, standards for sputum surveillance and the use of nebulised antibiotics (NA) or long term macrolides (LTM) in the LTV population have not been established.

Our aim was to record the rate of PA and describe its treatment, in a large cohort of LTV patients.

Methods Retrospective cohort study using the regional LTV service database to identify patients. Electronic patient records were analysed for LTV indication and treatment with NA and LTM, and cross-referenced with regional microbiology datasets: specifically, positive results for *Pseudomonas*, *Serratia*, *Proteus* and/or *Burkholderia* spp.

Results We identified 837 patients under the regional LTV service. 52/837 (6.2%) were ventilated via tracheostomy. 57/837 (6.8%) used a cough assist device alone and the remainder used non-invasive ventilation.

Figure 1 shows prevalence of PA by diagnostic subgroup; the burden of PA in bronchiectasis and CF was high as expected, however there was also a high burden of disease in patients with spinal cord injuries and primary muscle disorders, such as Duchenne Muscular Dystrophy.

Of the PA positive cohort, 45/146 (30.8%) were treated with NA: colistin (64.4%), an alternative NA (11.1%) or a combination (24.4%). 49.2% were taking long term macrolides: alone (56.2%) or combined with NA (43.7%).

Commencement of NA was poorly documented, hindering assessment of PA suppression or effects on emerging pathogens. *Proteus/Serratia/Burkholderia* spp. were isolated in 5.1% of the LTV cohort, of which 38% were co-colonising patients with PA.

Conclusions PA is common and seen across a diverse number of LTV indications, including neuromuscular conditions not traditionally associated with high bacterial load. PA prevalence was higher in tracheostomy patients. Many patients are treated with NA but the recording of eradication rates and sputum surveillance is low. The rate of 3 sentinel emergent pathogens was low but this may reflect the low rate of sputum

Prevalence of *Pseudomonas aeruginosa* by diagnostic subgroup

Abstract P41 Figure 1 Prevalence of *pseudomonas aeruginosa* by diagnostic subgroup