

significance; in a few cases perhaps representing spurious values. Recurrent (≥ 3 desaturations/24 hours) with/without more serious desaturations ($<90\%$ SpO₂) occurred in 6.2% (4/65). Oxygen was prescribed for only one-third of patients (35.4%; 23/65), but was administered to three-quarters (75.4%; 49/65) typically as a gradual 'down-titration' of high-flows given in recovery rather than in response to desaturation. Some patients remained on oxygen despite sequential SpO₂ values of 100%. Strong opiates were frequently prescribed (93.8%; 61/65), sometimes with night sedation (9.2%; 6/65).

Comment British Thoracic Society national guidelines encourage oxygen administration titrated to SpO₂, but we show that this aim may not currently be fully realized in surgical patients, perhaps partly due to lack of routine oxygen prescribing. Encouragement of early oxygen prescribing by surgeons and anaesthetists, who already routinely prescribe thrombo-prophylaxis, prophylactic antibiotics and analgesia, might help to ensure that patients are set-up for better matching of oxygen administration to need for the duration of their post-operative recovery.

Diagnosis and management of TB

P48 VITAMIN D LEVELS ARE NOT ASSOCIATED WITH MARKERS OF INFLAMMATION AND DISEASE SEVERITY IN ACUTE TUBERCULOSIS

doi:10.1136/thoraxjnl-2012-202678.189

FM Perrin, E Togun, S Stephens, O Sewo, RD Barker. *Kings College Hospital, Kings Health Partners, London, United Kingdom*

Background There is considerable evidence that patients with clinical tuberculosis in the UK have low levels of circulating Vitamin D¹. It has been suggested that acquired Vitamin D deficiency impairs immune function and therefore allows patients to transform from latent to clinical tuberculosis. Sceptics have suggested that the low Vitamin D levels seen in clinical tuberculosis are a result of disease activity rather than a cause of it. We examined whether Vitamin D levels were associated with blood markers of inflammation and disease severity inpatients newly diagnosed with tuberculosis.

Methods All patients diagnosed with tuberculosis at an inner London teaching hospital since 2000 were eligible for inclusion in the study although systematic measurement of Vitamin D levels has only been attempted in recent years. Vitamin D levels were classified as deficient $\leq 10\text{ng/ml}$, insufficient >10 to $<30\text{ng/ml}$ and sufficient $\geq 30\text{ng/ml}$.² The date treatment started was recorded. The first blood measurement of Vitamin D, Haemoglobin, Neutrophil count, c-reactive protein(CRP), erythrocyte sedimentation rate (ESR) and albumin taken within two weeks of treatment starting were recorded. All variables were assessed for correlation with one another using Pearson's correlation coefficient in SPSS.

Results One thousand four hundred and twenty two patients were identified of whom 262 had a measurement of Vitamin D. 151 (58%) were Vitamin D deficient and a further 96 (37%), Vitamin D insufficient. Data availability ranged from 1266 patients with a serum albumin to 222 patients with an ESR. Blood markers of disease severity and inflammation were significantly correlated but Vitamin D levels did not correlate with any of the other variables.

Discussion These data do not support the hypothesis that low Vitamin D levels in acute tuberculosis are a result of disease activity or severity. It would be reasonable to consider the prevention of Vitamin D deficiency as a means to reduce the conversion of latent to clinical tuberculosis.

References

1. Sita-Lumsden A, Laphorn G, Swaminathan R, Milburn HJ. Reactivation of tuberculosis and vitamin D deficiency: the contribution of diet and exposure to sunlight. *Thorax* 2007; 62(11):1003-7.
2. Rosen CJ. Vitamin D Insufficiency. *New England Journal of Medicine* 2011; 364(3):248-54.

P49 TUBERCULOSIS IN BIRMINGHAM IS SEASONAL

doi:10.1136/thoraxjnl-2012-202678.190

GCKW Koh, G Hawthorne, H Kunst, M Dedicoat. *Heartlands Hospital, Birmingham, United Kingdom*

Background Birmingham is a large industrial city with migrant populations from Pakistan, India, Somalia and Eritrea. Central Birmingham is highly endemic for tuberculosis (TB) with an annual

Abstract P48 Table 1 Correlation between Vitamin D levels and markers of inflammation and disease severity amongst patients presenting with tuberculosis at an inner London teaching hospital

		Neutrophil count at diagnosis	Platelets	ESR	CRP	Albumin
Vitamin D levels (ng/ml)	Pearson Correlation	-0.042	-0.084	0.294	-0.076	0.061
	Sig. (2-tailed)	0.506	0.185	0.269	0.361	0.326
	N	253	254	16	148	257
Neutrophil count at diagnosis	Pearson Correlation		0.363**	0.221**	0.311**	-0.166**
	Sig. (2-tailed)		0.000	0.001	0.000	0.000
	N		1252	219	811	1237
Platelets	Pearson Correlation			0.183**	0.100**	-0.001
	Sig. (2-tailed)			0.006	0.004	0.963
	N			221	813	1240
ESR	Pearson Correlation				0.514**	-0.522**
	Sig. (2-tailed)				0.000	0.000
	N				134	220
CRP	Pearson Correlation					-0.311**
	Sig. (2-tailed)					0.000
	N					813

** p<0.01