Changes in pulmonary function in systemic sclerosis

Sir,
Abramson *et al.* have recently presented a follow-up study of the pulmonary function in 66 cases with systemic sclerosis (SSc).¹ We have also performed a follow-up of spirometric function study in 52 patients with SSc by Pulmostar (Fenyves-Gut, Basel, Switzerland) volume-stable equipment.² The female/male ratio was 51/1, and 15 patients showed symptoms of diffuse cutaneous systemic sclerosis. The mean age at the onset of disease was 38.4 ± 8.8 years. The second investigation followed our first pulmonary function tests by a mean of 4.2 ± 3.8 (1–8) years.

In contrast to the geographic and genetic differences between the two patient populations, our findings, as shown in Table I, give further additional data that the majority of patients have abnormal lung function when first tested, but overall significant worsening of spirometry (including vital capacity and forced expiratory volume in one second (FEV₁)) is not characteristic of the

great majority of patients with SSc. The decrease in the vital capacity was not significant when compared to the values to the age- and sex-matched standards (Table I).

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References

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Table I Lung function tests in 52 patients with systemic sclerosis

	First investigation	Second investigation
Mean age (years)	44.7 ± 9.6	47.6 ± 9.8
Vital capacity (ml)	2496 ± 689	2393 ± 653
Vital capacity (%)*	70.9 ± 14.7	71.1 ± 15.8
FEV ₁ (ml)	2107 ± 623	1996 ± 624
FEV ₁ (%)*	84.4 ± 9.3	82.8 ± 8.5

*Percentage of the age, body surface, and sex matched controls.

Contamination of blood cultures during venepuncture: fact or myth?

Sir,
We read with interest the paper by Shahar *et al.* considering the sources and prevention of contamination of blood cultures.¹ We were relieved to note that their results support a 'routine' (that is, brief cleansing with 70% alcohol) rather than a strict regimen of antiseptic cleansing of the venepuncture site, as the former has been our recommended practice for many years.

Only 46% of their positive blood cultures were considered to be true-positives, the remainder being deemed contaminants. The authors conclude that such contamination is usually due to laboratory handling and processing rather than skin contamination at venepuncture. However, the patient's skin represents only one possible source of extrinsic contamination. Whilst contamination in the laboratory is recognized,² the bulk of reports of pseudobacteraemia describe contamination occurring on the ward, for example, antiseptic solutions for 'skin-prep' (*Pseudomonas* sp.),³ ESR bottles (coliforms)⁴ and house officers who were removing butterfly hub caps with their teeth (streptococci)!⁵ Contamination with *Bacillus* species has occurred from alcohol swabs⁶ and medical gloves.⁷ We have ourselves observed contaminated cultures caused by *Bacillus* spores in 70% alcohol (unpublished observation). The single most important contaminant in the study of Shahar *et al.* was

indeed a *Bacillus* sp. and we wonder whether the authors excluded these sources of ward-based contamination.

A further source of contamination which the authors fail to consider is that of intrinsic contamination, that is, transient bacteraemia. This is well recognized and occurs frequently during medical and dental procedures,⁸ but is also provoked by activities such as brushing teeth⁹ and chewing hard sweets¹⁰ in up to 22% of subjects. It also occurs spontaneously; as early as 1935 Okell and Elliott¹¹ detected streptococcal bacteraemia in 10.9% of a sample of normal adults before dental manipulation. Recent studies suggest that spontaneous bacteraemia, principally with *Staphylococcus epidermidis*, is the most important cause of false-positive blood cultures, occurring in 1.7% of healthy adults.¹² Zierdt¹³ in the type of controlled study suggested by Shahar *et al.*, detected spontaneous bacteraemia in 6.8% of blood donors employing a lysis-centrifugation blood culture technique.

Thus the sources of blood culture contamination are more complex than Shahar *et al.* considers; and we would urge vigilance at every stage from patient to laboratory to avoid this confusing phenomenon.

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