



administered it to themselves as an abortifacient. This off-label use as an abortifacient is particularly disturbing. Searle has raised these concerns in various forums in the past, and we continue to forward and refer similar reports to the Medicines Control Council. Furthermore, our concerns have been reiterated in a recent issue of this journal.^{5,6}

We are grateful that these issues have once again been brought to the attention of health care professionals. It is unfortunate that indiscriminate use of the product detracts from its significant benefit when used appropriately as a gastro-intestinal mucosal protectant.

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A RAPID SCREENING TEST FOR PLEURAL EXUDATES

To the Editor: Distinguishing between exudates and transudates is the initial step in determining the cause of a pleural effusion and deciding which further and often more invasive investigations should be carried out. Although numerous alternative methods have been suggested in the literature,¹ the application of Light's criteria² is the traditional method for making this distinction. According to these criteria, an exudate is defined as having at least one of the following: a pleural/serum (P/S) ratio ≥ 0.5 , a P/S lactate dehydrogenase (LDH) ratio ≥ 0.6 and/or a pleural fluid LDH concentration $> 200 \mu\text{l}$.

In an ongoing prospective study involving consecutive patients with pleural effusions admitted to Tygerberg Hospital, a large number of pleural effusions of various aetiologies were evaluated and 383 patients were included in this substudy. Pleural effusion and serum specimens were analysed for total protein and LDH, and classified as exudate or transudate according to Light's criteria. The pleural fluid was tested independently with Combur 9 (Boehringer Mannheim) urinary reagent strips. Due to the higher protein concentrations in pleural fluids compared with urine, a 1:10 dilution of pleural fluid with normal saline (0.9%) was made. The reagent strip was dipped directly into the test tube and the colour change read after 60 seconds against the colour scales on the label. The results were recorded as 1+ (0.3 g/l), 2+ (1.0 g/l) or 3+ (5.0 g/l). The results are summarised in Table I.

The finding of a 1+ protein on the Combur 9 reagent strips occurred in 49 patients, of which number 41 (84%) had transudates and 8 (16%) had exudates according to Light's criteria. Two hundred and twenty-nine patients had 3+ protein in their effusions, corresponding to 223 (97%) exudative and 6 (3%) transudative effusions. The finding of 2+ protein occurred in 105 patients, consisting of 55 (52%) transudates and 50 (48%) exudates. These findings are summarised in Table II.

Table I. Summary of results

Light's criteria Combur 9 protein content	Transudate N = 97	Exudate N = 286
1+	41 (42%)	8 (3%)
2+	50 (52%)	55 (19%)
3+	6 (60%)	223 (78%)

Table II. Summary of results

Combur 9 protein content Light's criteria	1+	2+	3+
Transudate	41 (84%)	50 (48%)	6 (3%)
Exudate	8 (16%)	55 (52%)	223 (97%)

Using the finding of 1+ protein as being suggestive of a transudative effusion, the sensitivity and specificity of the Combur 9 test was calculated as 42% and 97%, respectively. The corresponding positive (ppv) and negative (npv) predictive values were 84% and 83%, respectively. Similarly, using the finding of 3+ protein as a marker for an exudate demonstrated a sensitivity, specificity, ppv and npv of 78%, 94%, 97% and 59%, respectively. In this way, 41 (out of 97) transudates and 223 (out of 286) exudates were correctly classified. A total of 264 (69%) of the 383 effusions were correctly classified by this method.

Urinary reagent strips therefore provide a cheap, easy, fast and accurate screening test to distinguish between pleural exudates and transudates. This method should not be regarded as a substitute for laboratory investigations, but rather as an adjunct to the clinician's initial assessment in order to plan further investigations and management before more definitive tests become available.

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