Perspectives on pleural disease

P191 THE BIOCHEMISTRY OF 'NON-SPECIFIC PLEURITIS'^o

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Introduction Histological analysis of pleural tissue from biopsy, particularly that obtained via a thorascopic approach is considered the 'gold' standard in securing a diagnosis in pleural disease and is recommended as the final step in the work-up of an unexplained exudative effusion.¹ A significant proportion of biopsies return a 'non-specific inflammation and fibrosis' histological pattern, often termed 'non-specific pleuritis' or NSP. It is suggested that whilst malignant pleuritis and TB pleuritis have distinct histological features, most other causes of pleural disease yield a non-specific histological finding.² This study aims to further our understanding of the pleural fluid characteristics underpinning this under-researched entity.

Methods A retrospective analysis of prospectively collected data on all local anaesthetic thorascopies (LAT) and image guided pleural biopsy (IGPBx) at a large tertiary centre from 2014–2019.

Results Across 529 pleural biopsies, 47% (250/529) yielded a histological finding of NSP, whilst 40% (212/529) demonstrated malignant pleuritis and 5% (28/529) granulomatous inflammation.

Pleural fluid (PF) characteristics at time of presentation across malignant pleuritis and NSP groups from 2017–2019, demonstrated a significantly greater proportion of exudative effusions with malignant histology: 99% (103/104) vs 91% (96/106) (χ^2 1df = 7.6, $p=0.006$).

In patients with an exudative effusion, a greater proportion of biochemically 'concordant' effusions (both protein and LDH meeting Light's criteria for exudate) were seen in malignant pleuritis: 81% (83/103) vs 63% (60/96) (χ^2 1df = 8.03, $p=0.005$) (table 1).

Abstract P191 Table 1

	Malignant Histology	NSP Histology
PF Exudate	103 (99%)	96 (91%)
PF Transudate	1 (1%)	10 (9%)
Concordant Exudate	83 (81%)	60 (63%)
Discordant Exudate	20 (19%)	36 (38%)

(PF characteristics across malignant and NSP histological subtypes, concordance defined as PF protein >30 g/L and PF LDH >170 IU/L, discordance as only one of PF >30 g/L or LDH >170 IU/L)

Discussion There is significant variation in PF biochemical characteristics between NSP and malignant pleuritis. The significant increase in biochemical discordance in the former suggests distinct underlying pathophysiological mechanisms that remain poorly defined. Further research to understand the biology of NSP is required.

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P192 A TRAINING PROGRAMME FOR WARD BASED RESPIRATORY NURSES ON CHEST DRAIN CARE AND MANAGEMENT

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Background Chest drains (CD) are frequently inserted to manage pleural effusions and pneumothorax. However, they can be associated with harm (NPSA, 2020) and nurses' knowledge of chest drain care varies widely (Lehwaltdt, 2005). To our knowledge there are no formal training courses for ward nurses in CD management. We aimed to develop a formalised CD training programme for ward nursing staff to improve competence, confidence and safety.

Methods We developed a structured training module for ward nursing staff. This included an e-learning module, small group simulation training and supervised practice delivered by a Practice Development Nurse. The e learning module included:

- theoretical teaching about pleural pathologies, types of chest drains and bottles,
- caring for patients during drain insertion (including NatSSIP safety checks and post-procedure care)
- performing chest drain observations and completing the care pathway
- basic CD care (dressings, CD removal, patient transfers)
- safety and troubleshooting.

A questionnaire was completed before and after the course to evaluate knowledge, ability to maintain patient safety, and confidence in CD management and course satisfaction.

Results Between April and June 2021, 50 nurses working on a respiratory ward undertook the training programme. Confidence in chest drain management improved (44% rated themselves as confident before the course, compared with 96% afterwards). Similarly, participants' perceived ability to maintain patient safety improved from 44% of participants before the course to 96% afterwards.

The course was well received, with 100% of participants agreeing or strongly agreeing that the course enhanced their knowledge of the subject matter (14% and 86%, respectively).

Discussion This study demonstrates that a combination of theory and practical skills training for respiratory ward nursing staff improves knowledge and confidence in chest drain management. The training was quick and efficient to deliver and was well received.

We hope to expand the training to other areas (AMU, ICU) through chest drain champions in these areas. Also, we plan to develop rapid, refresher training to maintain competence.

Generic national training standards and online resources would be beneficial to standardise and improve standards and safety of ward-based chest drain care.