

Use of patient blood to treat air collecting around the lung

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| Submission date 22/03/2016 | Recruitment status No longer recruiting | <input type="checkbox"/> Prospectively registered <input type="checkbox"/> Protocol |
| Registration date 24/03/2016 | Overall study status Completed | <input type="checkbox"/> Statistical analysis plan <input type="checkbox"/> Results |
| Last Edited 24/03/2016 | Condition category Respiratory | <input type="checkbox"/> Individual participant data <input type="checkbox"/> Record updated in last year |

Plain English summary of protocol

Background and study aims

A pneumothorax is a serious condition in which air leaks into the space between the lung and the chest wall. This air pushes against the outside of the lung, causing it to collapse. Lung tissue that is damaged because of an underlying disease is more likely to develop pneumothorax as a complication (secondary spontaneous pneumothorax, SSP). When someone is suffering from SSP, it is very important to equalise the pressure in the chest so that the lungs can inflate properly. This is done by placing tubes into the space around the lungs in the chest (pleural cavity) so that any air can drain out of the chest (chest drainage). In some people, the air leak does not seal after chest drainage, and further treatment such as surgery is needed (persistent air leak). Persistent air leaks can be dangerous, as chest drains need to be left in place longer, which increases the risk of infection. Autologous blood patch pleurodesis is a technique in which the patient's own blood is injected into the chest drain in order to "patch up" the air leak. The aim of this study is to investigate the effectiveness of early autologous blood-patch pleurodesis in the treatment of SSP.

Who can participate?

Adults with SSP who are unable or unwilling to have surgery.

What does the study involve?

After the chest drains are put in place, participants are randomly allocated to one of two groups. Those in the first group have 50ml of their own blood injected into the chest drain on day three. If the air leak continues, this procedure is repeated on day five and day seven. Participants in the second group do not receive any injections of their blood, and are observed in the usual manner for 10 days. After this, participants in this group can receive the autologous blood patch pleurodesis on day 10, 12 and 14. Over the 10 days of the study (before the second group are given the chance to have the procedure), participants in both groups are examined every day in order to find out if the air leak is sealed. Once the air leak has stopped, participants are kept under observation in hospital for one or two days before being discharged. The length of time until the air leak stops and until patients are discharged from hospital is recorded in both groups. Participants also attend a follow up appointment a week after they are discharged to make sure that the air leak is still sealed.

What are the possible benefits and risks of participating?

Participants may benefit from a quicker discharge from hospital. There are no notable risks of taking part in the study.

Where is the study run from?

Menoufia University Hospital (Egypt)

When is the study starting and how long is it expected to run for?

September 2012 to February 2016

Who is funding the study?

Menoufia University Faculty of Medicine (Egypt)

Who is the main contact?

Dr Islam Ibrahim

Contact information

Type(s)

Scientific

Contact name

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32513

Additional identifiers

Protocol serial number

N/A

Study information

Scientific Title

Early Autologous Blood-patch Pleurodesis versus Conservative Management for Treatment of Secondary spontaneous pneumothorax: a randomised controlled trial

Study objectives

The aim of this study is to investigate whether early autologous blood-patch pleurodesis is better than conservative treatment for the management of secondary spontaneous pneumothorax.

Ethics approval required

Old ethics approval format

Ethics approval(s)

Ethics Committee - Menoufia University Faculty of Medicine, 03/10/2012

Study design

Interventional randomised controlled trial

Primary study design

Interventional

Study type(s)

Treatment

Health condition(s) or problem(s) studied

Secondary spontaneous pneumothorax

Interventions

Following chest drain insertion, participants are randomly allocated to one of two groups.

Group 1: Participants have intra-pleural instillation of 50ml autologous blood into the chest drain on day 3 of chest drain insertion. If the air leak continues, the procedure is repeated on day 5 and day 7. Once the air leak has stopped the drain is removed after 1-2 days and the patient observed for 2-3 days before discharge from the hospital. Participants attend a follow up visit after 1 week in which they have a chest X-ray.

Group 2: Participants are observed for air leak for 10 days. If the air leak persists after 10 days, then participants receive the intra-pleural instillation of 50ml autologous blood into the chest drain, which can be repeated on day 12 and 14. Once the air leak has stopped the drain is removed after 1-2 days and the patient observed for 2-3 days before discharge from the hospital. Participants attend a follow up visit after 1 week in which they have a chest X-ray.

Intervention Type

Procedure/Surgery

Primary outcome(s)

Time between insertion of chest drain and air leak stoppage is measured through daily clinical observations.

Key secondary outcome(s))

Length of hospital stay is measured in days.

Completion date

15/02/2016

Eligibility**Key inclusion criteria**

1. Aged 18 years and over
2. Secondary spontaneous pneumothorax
3. Unfit or unwilling to have surgery

Participant type(s)

Patient

Healthy volunteers allowed

No

Age group

Adult

Lower age limit

18 years

Sex

All

Key exclusion criteria

Not meeting the inclusion criteria.

Date of first enrolment

01/11/2012

Date of final enrolment

01/11/2015

Locations

Countries of recruitment

Egypt

Study participating centre

Menoufia University Hospital

Gamal Abdel Nasser Street

Shibin Al Kawm

Egypt

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Sponsor information

Organisation

Menoufia University Faculty of Medicine

ROR

<https://ror.org/05sjrb944>

Funder(s)

Funder type

University/education

Funder Name

Menoufia University Faculty of Medicine

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Available on request

Study outputs

| Output type | Details | Date created | Date added | Peer reviewed? | Patient-facing? |
|---|-------------------------------|--------------|------------|----------------|-----------------|
| Participant information sheet | Participant information sheet | 11/11/2025 | 11/11/2025 | No | Yes |