Itching is defined as an unpleasant sensation which elicits the desire to scratch.

It can be extremely distressing and debilitating.

The skin comprises 15% of the body's total weight and of course, covers the entire body, so that the effects of generalised itching can be extremely widespread.

Pain and itching share common neurophysiological mechanisms and neurological transmission. Activation of nerve endings can result from internal or external stimuli of various types including thermal, mechanical, chemical or electrical.

Scratching is a motor response following the perception of itch, and is a spinal reflex. It may relieve itching for 15-25 minutes, but may also enhance the itching sensation, thereby setting up a typical itch-scratch-itch cycle.

Other physical stimuli such as vibration, heat and cold may also attenuate the itch-scratch-itch cycle. Hard scratching may substitute pain for itch.

Most itching is worst at night, and may thus disturb sleep.

In Aldrete's survey (1) he found that 5% of his respondents suffered from pruritus.

CAUSES:

A. External causes
B. Skin diseases
C. Systemic causes

Localised:

- Scalp: seborrhoeic eczema, neurodermatitis, psoriasis; head lice.
- Eyelid: airborne irritants or allergens; allergic reactions to cosmetics/nail varnish.
- Fingers: eczema, scabies, contact dermatitis.
- Legs: gravitational and discoid eczema.
- Anus (pruritus ani): anal fissure, haemorrhoids.
- Vulva: candidal infection (especially after antibiotics or in diabetic patients).

Generalised:

External causes:

- Climatic: low humidity (e.g. cold weather or central heating) renders skin brittle and allows minor irritants such as soap to penetrate, causing mild irritation.
- Dry skin in elderly causes common itchiness. Dry skin associated with atopic eczema also prone to itching. High humidity may also cause itching secondary to sweat retention.
- Particulate matter: foreign body e.g. glass fibre, hair, etc.
- Chemical : detergents (optical brighteners).
- Parasite infestation : scabies, mites.
- Aquagenic pruritus: on contact with water: due to underlying systemic disease.
- Excessive bathing
- Radiotherapy.

Skin diseases:

- Urticaria
- Lichen planus
- Contact dermatitis
- Atopic eczema
- Insect bites
- Psoriasis
- Fungal infection
- Dry skin
- Sunburn
- Pemphigoid

Systemic causes:

B = Blood disease including iron deficiency
L = Liver disease including drug-induced liver damage
I = Immunological, Autoimmune, Infection
N = Neurological disease, Neoplastic disease (cancer)
K =Kidney disease: including chronic renal failure
E = Endocrine disease: diabetes*; thyroid disease
D = Drug

(*usually localised itching due to candidiasis)

In dealing with arachnoiditis, we are likely to be looking mostly at N, D (and possibly I).

Neurological causes include MS. Paroxysmal unilateral (one sided) pruritus has been recorded with central nervous system disease.

Neurogenic pruritus: may occur after strokes or with spinal tumours or MS.

Hence it is feasible to suggest that itching might be a feature of arachnoiditis. Bearing in mind the possible link between arachnoiditis and autoimmune diseases, it is important to bear in mind that itching can be a feature in conditions such as Systemic Lupus Erythematosus, and Sicca syndrome (Sjogren's).

Drug-induced itching: commonly seen with:

- Opiates
- CNS stimulants/depressants
- Allergies: sensitivity to a variety of drugs seems to occur in some arachnoiditis patients
- Cimetidine
- aspirin
- monoclonal antibodies
- vitamin B complex
- erythromycin
- oestrogen, progesterone, testosterone
- tolbutamide
- phenothiazines
- chemotherapy
- quinidine (note: this is not an exhaustive list)

Rashes will be covered in a separate article.

Important aspects of the history:

1. is itching localised (most likely external cause)/generalised (most likely internal cause)?

2. Is only exposed skin affected (external cause likely: but note that some drugs cause photosensitivity)

3. Are any other family members affected?

4. Is occupational hazard likely? (e.g. exposure to fibreglass)

5. Is there exposure to plants/animals/chemicals?

6. Has there been recent travel abroad?

7. Medication history especially allergies.

Characteristics of itching to note:

1. site: localised/generalised

2. precipitating and relieving factors: e.g. relationship to hot bath

3. any visible rash

4. severity: influence on daily activities/sleep

5. time influence: worse at night?

6. Seasonal variation?

Note any family history of systemic illness as in the BLINKED list.

Physical examination:

Will include thorough examination to check for signs of skin and systemic disorders.

Tests:

Blood tests:

1. blood count, ESR (general indicator of inflammation)
2. liver function tests
3. serum iron
4. thyroid function tests
5. glucose

Chest X-ray

Stool for occult blood/ signs of parasitic infestation
Urine
(Skin biopsy)

Further investigations may also be necessary.

Treatment:

1. treatment of the underlying cause if possible

2. general symptomatic treatment: reduce/avoid precipitating factors: e.g. dryness of environment, wearing irritating fabric, overheating, hot, spicy food, stress. Also: application of topical treatment such as emollient, antihistamine cream or calamine lotion.

3. Oral medication: antihistamine tablets (histamine is a known itch mediator);

tricyclic antidepressants (such as amitriptyline) may help, and are useful in combating the neuropathic pain commonly experienced by arachnoiditis patients.

4. Other measures include: TENS and Odansetron.