

# Cystic Hygromas

## What is a cystic hygroma?

In our body we have different types of blood vessels. Most people are familiar with arteries and veins but there is another system of vessels called lymphatics. These drain not blood but a clear fluid called lymph from around the body. The lymphatic vessels join together to drain into the large veins in the neck.

Sometimes children are born with abnormalities in these lymphatic vessels and instead of narrow channels they form wide ones. These then fill with lymph fluid to form cysts which cause swelling around the body but usually in the neck. The term cystic hygroma means 'water-filled sac'. A more accurate term is lymphatic malformation which characterises the abnormality; however, water-filled sac is a fairly accurate description of the problem as well.

The size and location of cystic hygromas varies enormously from massive problems in newborn babies, which obstruct the breathing and feeding, to minor cosmetic cysts in older children. For this reason everyone has to be evaluated individually.

## Is it a tumour?

It is not a cancer and does not spread around the body. It is more like a type of birth mark.

## Will it grow?

Growth patterns are variable and, to some degree, unpredictable. Lymphatic tissue generally slowly grows as the children grow and the cystic hygromas tend to grow as well. Episodes of sudden swelling following colds and infections are not uncommon and these generally settle down again. They are related to increased fluid within the cyst. Occasionally, however, cystic hygromas shrink down and even (rarely) disappear.

## Treatment:

There are 3 options for any cystic hygroma. As they are all different there is no substitute for detailed imaging (preferably with MRI scanning) and assessment by someone experienced in managing them.

**Option 1** - Simple observation. This is generally recommended for small lesions that are causing minor symptoms only.

**Option 2** - Surgery. If the lesion can be completely removed without damaging other structures then it will not come back and this is the end of it. This is what many patients would like to achieve. An experienced surgeon needs to evaluate the lesion to identify whether this is possible and what risks are involved. In general terms, large cysts (macrocysts) are more favourable as our lesions in the neck. If small cysts are left behind after surgery, because they are inaccessible, they may never cause problems (see below – with sclerotherapy all the cysts are left in). Problems in the tongue and mouth are more difficult to remove completely although surgery to this area to reduce the problems may be appropriate. Cysts on the tongue surface may be treated with coblation surgery.

**Option 3** - Sclerotherapy. The principle of sclerotherapy is to inject a substance into the cyst which causes inflammation. The body's reaction to this foreign substance causes the cyst to scar down. The lymphatic malformation remains present but is scarred so it can't fill up with fluid again. The end result is that the lump is smaller or not visible.

Following the injection the cyst increases in size, sometimes dramatically, then gradually reduces in size over the next 3 months or so. If the response is incomplete injections can be repeated.

The attraction of sclerotherapy is that it avoids surgery, often avoids a scar and risks of nerve damage are less. A general anaesthetic is required for most children.

Complications can occur with sclerotherapy including scarring and severe reactions. Various agents are used including doxycycline and OK432 (Picibanil).

Injection sclerotherapy is best performed under ultrasound control as inadvertent injection outside the cyst can make subsequent surgery much more difficult. It is best performed by an experienced interventional radiologist.

## **Summary**

The modern management of cystic hygromas is highly specialized and all lesions need to be considered individually. Surgery and sclerotherapy have improved the lives of many children suffering from this condition.