Clinical Guideline

ABDOMINAL MASS

SETTING	Primary and Secondary Healthcare Institutions in the Western Cape which refer to Red Cross War Memorial Children's Hospital (RCWMCH)
FOR STAFF	Primary and Secondary Doctors and Nurses who refer patients to RCWMCH
PATIENTS	Patients under the age of 12 years old with a palpable abdominal mass

Introduction

Abdominal mass can be a very stressful presentation because of the possibility of underlying malignancy and what this can mean for the patient. However, there are many other diagnoses that can present in the same way. Differentiating these can sometimes require careful investigation.

It is the role of the primary care clinician and nurse to identify patients with evidence of clinical instability and stabilise these patients before referring them to the most appropriate speciality. Patients who are not unstable may benefit from further examination and assessment prior to discussion with a specialist as this may guide the transfer process.

Most patients with an abdominal mass will need assessment at the specialist level. The purpose of this guideline is to provide primary care clinicians and nurses the framework to assess a child with an abdominal mass and to explain the clinical pathways that might be appropriate in different scenarios.

Background

Cancer in children is rare, but it has a high mortality rate which means that it kills more children than any other disease process. Its deadliness, subtle onset and the emotional impact it has on families and healthcare workers makes cancer in children very challenging to manage.

The good news is that the treatment options are improving all the time and survival rates continue to climb. The cancers of childhood generally are responsive to the treatment available today, but the treatment protocols can be complicated and lengthily. Early diagnosis is critical to a good outcome and that speaks to the importance of a thorough primary care assessment.

Important details on history

How old is the child?
How and when did the parent notice the mass?
Is there a history of weight loss or failure to gain weight?
Are there any associated symptoms (lethargy, night sweats, cough, leg weakness, constipation, diarrhoea or vomiting)?
Is there any blood in the stool or urine?
If the lesion is in a neonate: ask about any antenatal scans that may have been done

Important details on examination

General:

- Evidence of weight loss or failure to thrive

- Features of sepsis
- Pallor or jaundice
- Lymphadenopathy
- Skin changes: blueberry muffin spots, panda bear eyes,
- Mucosal pigmentation or freckling

Features of bowel obstruction:

- visible stomach bubble/ bowel loops
- generalized abdominal distension
- cramp-like (coming-and-going) pain
- vomiting and decreased stooling

Urinary tract obstruction (Palpable bladder)

Perineum:

- Is there a normal anus opening visible?
- In girls: Is there a normal vaginal opening visible?

Describe the mass:

- how big is it
- what is its shape and contour
- can you feel the edges clearly or does it feel like it may arise from another organ
- consistency (hard, soft, cystic, pulsatile, does it leave an imprint of your finger after you push into it)
- mobility (fixed vs moving freely)
- anatomical relations (pelvic vs right upper quadrant etc)

Important baseline investigations

- Temperature and BP
- Urine dipstick
- Full blood count and Serum urea, creatinine and electrolytes
- If the patient is jaundiced add liver function tests
- Abdominal Xray: in patients with a history of obstructive symptoms or abdominal tenderness
- Abdominal Ultrasound: useful in most patients with a mass

Management and referral guidance

It is not the role of primary level clinician to reach a final diagnosis of an abdominal mass. It is important that a clear assessment is made to guide the initial referral pathways and investigations.

As always, initial stabilisation of unwell patients is paramount prior to referral. This would include an NGT on free drainage in all vomiting patients, ivi access in all patients with dehydration and simple analgesia as a minimum.

Below is a grouping of different broad circumstances which should guide the next steps in management.

Diagnosis	Clinical features	Management and referral guidance

Tumours and malignancies	Palpable mass which may have a history of weight loss or other general features. The lack of associated features does not exclude the possibility of cancer.	Possible malignancy required urgent investigation and management. If in any doubt, it is best for a patient with an abdominal mass to have an assessment at a paediatric unit with the capacity to do an ultrasound and further investigations. Urgent referral to general paediatrics
Intussusception	Most common between 3 months and 3 years of age. A palpable mass associated with vomiting and red stools. The history is short (hours/days rather than weeks) and often preceded by a history of a viral illness.	Initial stabilisation with NGT on free drainage, ivi access and fluid resuscitation is vital. Urgent referral to paediatric surgery after stabilisation
Pelvic mass with no vaginal opening in a girl	Pelvic mass can be many things, in the case of an absent vaginal opening this could be a hydrocolpos which is associated with renal obstruction in young baby girls. In older girls a haematocolpos should be considered. These patients will also have a history of cyclical abdominal pain and will not have started their menses yet.	Urgent referral to paediatric surgery is indicated.
Hepatosplenomegaly	Organomegaly is often initially assessed as a mass or abdominal distension. Examination can differentiate these through careful assessment of the origin of the mass.	And enlarged liver and/or spleen may indicate several different diseases. Urgent referral to general paediatrics is indicated.
Faecaloma	A ball of poo in the pelvis on a background of constipation. The patient will often have a history of soiling in their underwear if you ask about this. When you palpate this mass, you can sometimes leave an impression on the surface of the mass with your fingers, like the mass is made out of firm clay.	Patients with a convincing faecaloma should be managed as per the constipation guideline.