Dangerous biopsies

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Disclosure

Speaker name:

I have the following potential conflicts of interest to report:

- Consulting
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- Other(s)

☒ I do not have any potential conflict of interest
Dangerous; ADJECTIVE
UK /ˈdeɪndʒərəs/ • likely to harm or kill someone, or to damage or destroy something a dangerous dog
• a dangerous stretch of road
• Air pollution has reached dangerous levels in some cities.
• highly dangerous: an exciting but highly dangerous sport
• potentially dangerous: Children are taught to avoid potentially dangerous situations.
• dangerous to: It is not yet known whether these chemicals are dangerous to humans.
• it is dangerous (for someone) to do something: It’s dangerous to walk around here on your own at night.
Dangerous: medical meaning

• Risk is too high hence unacceptable
• The risk outweighs the benefit
• May cause long term damage which may be a life altering event
• Can make a disease worse
• All the above
How to define a dangerous procedure?

- Is there a consensus on any postulate possible?
- Is there truth?
- Can an argument be upheld using medical science?
- Do we understand what we see the same way?
- Are we the foot soldiers of the “sacred” MDTs
- If blind adherence to the MDTs verdicts applies we may breach: primum non nocere line of our Hippocratic Oath
How to identify/quantify danger in medicine?

• Medical risk is usually related to a factor (known as a risk factor) that (often in conjunction with other risk factors) modulates the probability of a disease or event occurring, worsening or improving in individuals in whom it is present. Medics are faced on a daily basis with decisions on risk that--for example in therapeutics--involve calculation of the benefit-risk balance. Individuals (whether or not they are ill) are also confronted with risk in their decision-making.

• Can we rely on our own and/or collective heuristics in order to set up the boundaries of danger in medicine
Let’s start!

- 50-year-old women
- Vague abdominal pain
- Not feeling right
- The symptoms lasted over six months and do not want to go away
- No weight loss, no change in bowel habit, the appetite is unchanged
- Examined by a surgeon who found the abdomen unremarkable
- Referred for MSMBO
- F/U of MLIVEC + MRCP
The culprit is here, what the hell?
The culprit is here, what the hell? Part 2
DWI shows restriction of water motion within the culprit a month before
Did not change significantly over six months
No disease elsewhere, no change in symptoms during COVID 19 craze+++

• ?
Biopsy of course is required, no rocket science here

• How?
• IR?
• Surgical !?
USS guided Bx was performed - 1
USS guided Bx was performed - 2
USS guided Bx was performed - 3
USS guided Bx was performed - 4
Survived!

- Levobupivacaine @10 ml 2.5 mg
- Performed as an outpatient procedure
- Pain free intervention
- Asymptomatic throughout and 90 minutes after the procedure. Small gallbladder haemorrhage only!
- Discharged home after 90 minutes IR ICU recovery
Portocaval hepatoduodenal lymph node 36.5mm, not significantly different since the 15th February 21.

MACROSCOPIC EXAMINATION

Single core measuring 19mm.

Cut up by J Revell. Blocks: 1, AE.

MICROSCOPIC EXAMINATION

Core of a nested solid and acinar neoplasm in a fibrous stroma. The tumour cells have abundant eosinophilic cytoplasm and round to oval hyperchromatic nuclei which are mainly monomorphic but occasional areas of nuclear pleomorphism are noted. No mitotic figures are seen and there is no necrosis. No lymph node parenchyma is identified.

Mucin stains show some acidic and focal neutral mucin within a few of the glandular lumina. Immunohistochemistry is strongly positive for MNF116, CD10 and synaptophysin with focal widespread dot-like perinuclear positivity for CK20. The tumour cells show moderate nuclear positivity for CDX2 and there is also weak nuclear positivity for PAX5. A few cells are positive for PR but ER is negative. The tumour cells are negative for CK7, SOX11, CD8, CA125, TTF1, WT1, HSA and Napsin. There is some membranous Beta-catenin positivity.

The appearances are those of a mixed neoplasm showing largely neuroendocrine differentiation but also some glandular differentiation. Gastrointestinal/pancreatic neuroendocrine tumours (GEPNETS) may show up to 30% endocrine differentiation but remain within this category. Alternatively, a mixed adeno/neuroendocrine tumour needs to be considered with very low mitotic activity (less than 1/50 high power fields) and a MIB-1 proliferation index of around 2%, this would probably be classified within the GEPNET grade 1/grade 2 neuroendocrine tumour grouping. Further immunohistochemistry is in progress and a supplementary report will follow.
36 year female patient

• Night sweats
• Weight loss
• Malaise
• Loss of self esteem
• Awoken drenched in sweat
CT chest, abdomen and pelvis with IV contrast
Large mediastinal mass, nil else

• Anterior mediastinunm
• No bone erosion
• Low density and no enhancement
• ROI HU – 38-43; solid
• Engulfs the vessels and left lung involvement
Large mediastinal mass, nil else

- ?lymphoma
- Thymus cancer
- Thymoma
- Lung cancer invading the mediastimum
Primary inoperable mediastinal and/or left lung tumour, tissue diagnosis is indicated.

• How?
• CT guided
• U/S guided
• VATS?
• EBUS?
Ultrasound guided mediastinal mass biopsy

• Quick
• Safe
• Real time control
• You can stay away from the sensitive mediastinal content
• Dangerous?
• No free lunch yet, low risk procedure
The planning
The execution
The check after
The diagnosis

- Anaplastic large-cell lymphoma (ALCL)
74 year old women with T4 pancreas head cancer
74 year old women with T4 pancreas head cancer
74 year old women with T4 pancreas head cancer
74 year old women with T4 pancreas head cancer
74 year old women with T4 pancreas head cancer
74 year old women with T4 pancreas head cancer
Right adrenal mass as an isolated lesion
Right adrenal mass as an isolated lesion
Right adrenal mass as an isolated lesion
Liver segment 1 isolated lesion
Liver segment 1 isolated lesion
Posterior mediastinal mass in 68 year old men
Posterior mediastinal mass in 68 year old men
Posterior mediastinal mass in 68 year old men
54 year old men with a previous history of cancers
54 year old men with a previous history of cancers
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54 year old men with a previous history of cancers
The lesion, 74-year-old lady treated for CRC

- Primary resection of the tumour
- Nil distant at the initial staging
- CEA rising
- CT/PET negative
- Yet a tiny lesion has been spotted in the Morrison’s space
The CT/PET and CTAP with IVCM
Story is more complicated

• PMH of tuberculosis hence USS guided biopsy has been carried out, not shown, histology confirmed mucinous deposit from the CRC, removed surgically, CTAP 6/12 after
THE LESION HAS BEEN REMOVED, BUT!
• 70-YEAR-OLD LADY
• RIGHT THYROID NODULE WITH A CENTRAL COARSE CALCIFICATION
• THYROID MDT DECIDED SUSPICIOUS HENCE BIOPSY IS INDICATED
FROM ROUTINE TO A MURDER!
FROM ROUTINE TO A MURDER!
FROM ROUTINE TO A MURDER!
FROM ROUTINE TO A MURDER!
Take away home points

• The “easy” biopsies may not be safe
• The “safe” biopsies may not be easy
• Think many times before you decide to biopsy a virgin operable lesion in a human body
• Think a remedy if adverse effect of your procedure occurs
• The limits of IR in principle are defined by the fear itself
Thank you very much
Dangerous biopsies

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