



# The Weekly Probe

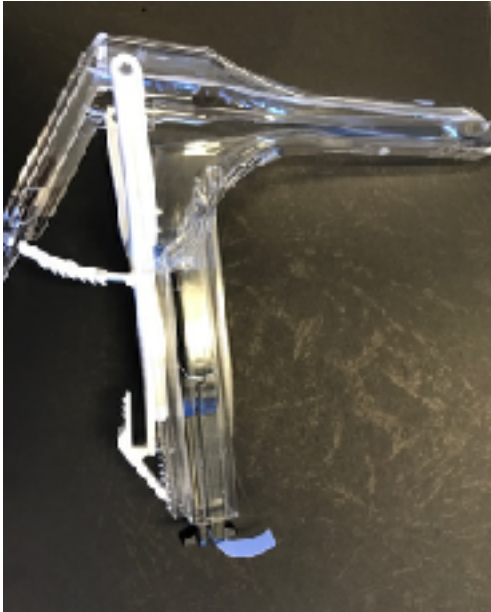
30th March 2017

Volume 14 Issue 12

**Measles** – this alert must recycle every 5-6 weeks yet there is another alert regarding measles. This week it relates to 3 cases in the Auburn area. Remember it presents with fevers and the 3Cs – cough, coryza and conjunctivitis – followed a rash after 3-4 days of symptoms: face then trunk then the limbs. If unsure consult, test and refer to the PHU via switch.

**LED speculums** –We're now stocking vaginal speculums which have a built in LED light. So no need for a separate light source.

There's a small adhesive strip that needs to be removed to activate the light source prior to use.



## THIS WEEK

<b>Last week's Case – de Winter waves and Wellen's syndrome</b>
<b>Monopoly sign</b>
<b>Glottic Impersonation</b>
<b>Joke / Quote of the Week</b>
<b>The Week Ahead</b>

## LAST WEEK'S CASE - de Winter T waves – Wellen's Syndrome

Many of you may have heard of Amal Mattu, a US based emergency physician who really enjoys a good ECG, being a great speaker on the topic. He also has a site for subscribers <https://ecgweekly.com/> yet there are other sites which compile his old discussions such as this [link](#)

He also discusses a recent case from Liverpool of a 42yo lady who presented with sharp chest pain radiating to the neck and back (see below).

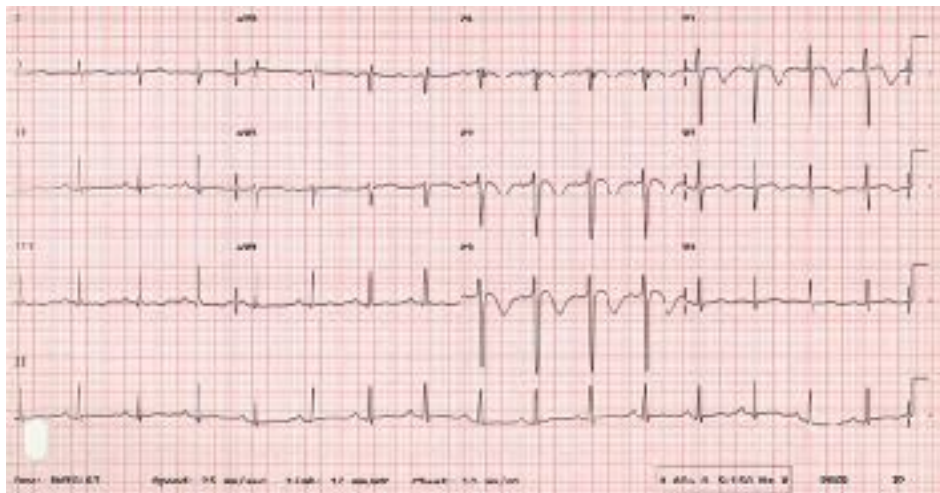


Firstly it's worth looking at **Wellen's syndrome**, something more well known. Wellens' syndrome (WS), also known as LAD coronary T-wave syndrome was originally described in 1982 by Wellens in a landmark study, where 12 of the 16 (75%) patients observed went on to develop extensive anterior AMIs within a few weeks of hospitalization. In a follow-up prospective study, where urgent percutaneous coronary intervention (PCI) was performed on all 180 patients meeting WS criteria, 100% were found to have at least a 50% obstruction in their LAD artery.

The ECG abnormalities of WS appear in 1 of 2 ways:

- the more common variant (76% of cases) presents with symmetric and deeply inverted T waves in the precordial leads, usually V2 and V3, with isoelectric (normal) or minimally elevated (less than 1 mm) ST segments, or
- the less common variant (24% of cases) presents with biphasic T waves in the precordial leads, again, usually V2 and V3.

Wellen's criteria identifies an important high risk subgroup of ACS patients. Specifically, the clinical criteria and electrocardiogram (ECG) changes found in WS are highly specific for those patients with a high-grade SUB-ACUTE stenosis of the proximal LAD coronary artery who are at risk of having an anterior wall acute myocardial infarction (AMI) within the next 2 weeks -- usually within the next several days yet can be within hours.



As pointed out by Dr Smith on another great ECG blog <http://hqmeded-ecg.blogspot.com.au> Wellens' is:

1. Wellens' syndrome represents a state of reperfusion of the infarct related artery
2. Ischemia may be so brief that Wellens waves do not evolve
3. Ischemia may be so brief that troponins are borderline or normal
4. Ischemia may be so brief that wall motion normalizes (though presence of wall motion abnormality would have a very high positive predictive value for confirming the ECG findings.).

The key point about the above is that the abnormalities are present in patients when they are asymptomatic (i.e., pain-free). Making it trickier, the ECG findings tend to disappear during bouts of angina -- i.e., the ECG looks more "normal" during episodes of chest pain.

If such patients are identified, stress testing is strictly contraindicated, as this may precipitate malignant arrhythmias or even result in death. Admit for PCI- yet this can occur in the next day! Keep a close eye on their symptoms and ECGs.

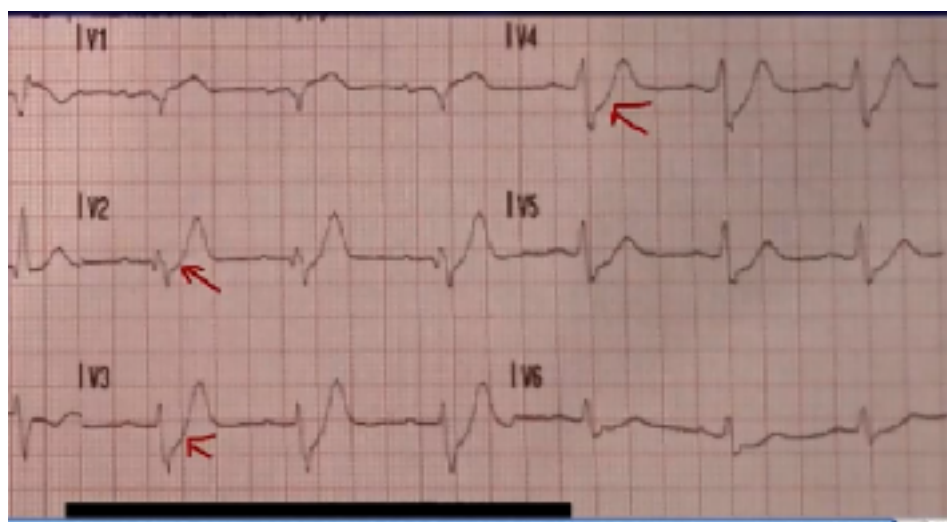
### What about the case and the first ECG?

This shows de Winter T waves a sign of **ACUTE** LAD occlusion. This was described by de Winter, et al in NEJM 2008 359(19):2071-2073 where they described 30 patients with LAD occlusions. On their ECG, similar to the one below which is more typical:

- 1-3 mm of upsloping ST depression in leads V1 to V6 (see red arrow heads) that continues into
- tall, positive symmetrical T waves, with normal QRS and loss of R-wave progression and with
- 1-2 mm ST elevation in aVR.

Note that these changes can be a static process that persists until coronary patency is established yet can be a dynamic process which may progress to overt ST elevation.

This is 65yo man who presented with c/p. The ECG demonstrates nicely the classic findings on de Winter T waves. On further ECG testing they found that this was not a transient feature but later progressed to ST elevation.



Looking back at ECG 1 we see the start of the anterior MI with ST elevation in V2 with de Winter waves anteriorly. The patient was transferred to the cath lab where they found LAD occlusion.

**THP** - Thus the de Winter waves indicate the patient needs reperfusion (PCI or thrombolysis) **now**- pull the finger out, make the phone calls, fax the ECGs, jump through those hoops – but don't wait till the next morning.



An Xray from a couple of weeks ago is diagnostic of Monopoly sign. It occurs when the drunken losing player or unattended infant decides to swallow the token of the opposing player and results in instant referral to the ED, not gaol. In this case it was the scottie dog!

Apparently the makers of the game are changing the tokens in September so we won't be seeing the thimble, the wheelbarrow or the boot in coming generation of swallows. Instead the new line up, in order of popularity will be:

- Scottie Dog: The best friend of Mr. Monopoly since the 1950s
- T-Rex: The T-Rex got the second most overall votes and made history as the first dinosaur token
- Top Hat: A staple in the game since 1935
- Car: The 1930s roadster crossed the line in fourth place
- Rubber Ducky: The new Rubber Ducky token came in fifth in overall votes
- Cat: The cat which first came into the game in 2013 is sixth favourite
- Penguin: The penguin token is described as "the new style muse"
- Battleship: The battleship token secured the eighth spot to cruise into the next generation of the game

## **“Glottic impersonation”**

A college found this article on one of the trap in intubating patients. Due to technical and anatomical reasons, the oesophageal opening may be distorted so that it looks like the glottis. Note that the anatomy superior / anterior to this (G) is the normal glottis. Beware!

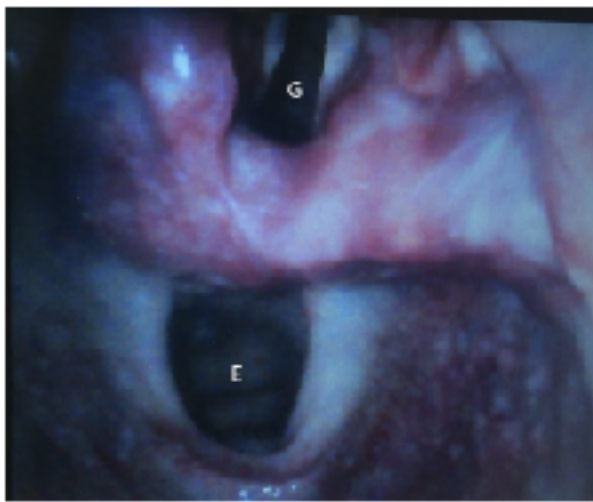


Figure A videolaryngoscopic image of a lightly embalmed cadaveric airway showing how forceful laryngoscopy can distort the tissues such that the esophageal opening (E) might be confused with the normal glottic opening (G) thus impersonating it

PS – Lightly embalmed is not what happens to Damo and Michelle at the Christmas party.

**Ref** Kovacs G, Glottic Impersonation, Canadian journal of anaesthesia. 64(3):320. 2017.

Please forward any funny and litigious quotes you may hear on the floor (happy to publish names if you want)

#### THE WEEK AHEAD

<i>Tuesday</i>	<i>0815-0930</i>	<i>Medical Grand Rounds, Auditorium, Level 2 – Emergency Department “The Soar Project: Quality Improvement in the ED”.</i>
<i>Thursday</i>	<i>1200-1330</i>	<i>JMO Education, Staff Education Centre, Level 2 – Drug and Alcohol, Dr Sachin Patil</i>