

Watch your language!



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We continue our series in which Consultant Interventionist Dr Michael Norell takes a sideways look at life in the cath lab...and beyond. In this column, he considers Latin.

*Latin is a language
As dead as dead can be,
It killed the ancient Romans
And now it's killing me.*

Such was the oft muttered rhyme that could be heard in the hushed corridors of a North London Grammar school, *circa* the late 1960s. Indeed, I suspect this echoed in most classrooms up and down the country as teenagers struggled to recite “*amo, amas amat, amamus, amatis, amant*”, even though the social and emotional significance of the verb had little relevance to ‘Norell minor’ at that age.

As O levels (or GCSEs as they are now known) appeared over the horizon, we had to select a subject in addition to the usual Maths, Add. Maths (whatever that was), Physics, Chemistry, History, Eng. Lang., Eng. Lit. and French. This choice was from Biology, German and ...Latin.

Choices

At that time I had a vague idea that Medicine might feature among my career possibilities, in addition to footballer (yeah, right!), spy or comedian. So while learning about plants and animals might have been considered the logical answer, there was something about studying an ancient tongue that had a classical quaintness about it. Learning Latin also came with a certain degree of elitism as the class contained relatively few pupils, was taught by one of the school's most exacting and strictest ‘masters’, and resulted in one being regarded by one's peers as a tad quirky.

Furthermore, I had rationalised my juvenile decision with the contention that much of the language of Medicine had its origins in Latin and that I could make up for any ignorance of anatomy and physiology by taking Zoology at A level. Also, our classwork or homework (we didn't call it ‘prep’ because this was a state school), had to be written – without errors – with a fountain pen, and in an impressive hardback exercise book, rather than in the more traditional and slightly cheap looking soft-cover version used by my pals for all other subjects.

Translation

And so began my brief flirtation with what might be regarded as ‘classics-light’ and culminated eventually in a reasonable grade C. Lessons were festooned with translations from Latin to English, and *vice versa*, and characterised by developing familiarity with phrases that could have no possible practical use in the modern era whatsoever.

So, sentences like “the daughters of the farmers are in the field with the sailors” would require writing in Latin, and the reverse would apply to other memorable lines like “some say one thing, others another, but they all blame the folly of the general”.

Our main textbook (*Approach to Latin*, if I recall) did contain some pleasing attempts at humour, allowing the odd smile or chuckle to permeate the otherwise stony silence of our classroom. So the phrase “*o me miserum*” appeared in the vocabulary list as “woe is me” and, as an alternative, “hang it all!”

History

There is no doubt that such study also provided a glimpse into Roman history and the various characters dotted about the Empire that have since become legend. One such personality was Cicero who, it turns out, was a bit of a wit. In one section of our textbook he appeared in a passage for translation headed “Some of Cicero's Jests”. Apparently he was sitting in judgement over a youth accused of bumping off his father by poisoning him with appropriately doctored pastries. The angry young man continually berated the judge with an endless series of expletives, which Cicero listened to patiently. Eventually, after the rancour had subsided, our hero remarked, “Shout all you like. I would rather have your insults than your cakes”. (I'll pause here to allow you to recover from a fit of uncontrollable hysterics.)

Modern TV and cinema provide somewhat more lurid accounts of that portion of world history. No doubt if our own lessons had been dotted with more of the sand, sweat, sex, scandals, seedy politics and grotesque violence that characterise films like *Gladiator*, our classes would have been well over-subscribed, and recruitment to increase the number of available Latin teachers would have been demanded.

The complete collection of these and other articles is now available in a book ‘The Oblique View’. Further details can be obtained from Nikki@tfmpublishing.com or www.amazon.co.uk

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USES For patients with type 2 diabetes mellitus:
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- as triple combination therapy with a PPAR-γ agonist (i.e.,
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in patients inadequately controlled on their maximal
tolerated dose of metformin and a PPAR-γ agonist.

- as add on to insulin (i.e., triple combination therapy) as an
adjunct to diet and exercise to improve glycaemic control
in patients when stable dosage of insulin and metformin
alone do not provide adequate glycaemic control.

DOSE AND ADMINISTRATION Take twice daily with
meals. When used in combination with a sulphonylurea, or
with insulin a lower dose of the sulphonylurea or insulin may
be required to reduce the risk of hypoglycaemia. Patients
with renal impairment: not to be used in patients with
moderate or severe renal impairment (creatinine clearance
< 60 ml/min). Patients with hepatic impairment: not to be
used. Elderly: use with caution as age increases. Monitoring
of renal function is necessary to aid in prevention of
metformin-associated lactic acidosis. Exercise care in
patients > 75 years of age due to limited safety data in this
population. Children: not recommended below 18 years of age.

CONTRA-INDICATIONS Hypersensitivity. Diabetic
ketacidosis and diabetic pre-coma. Moderate and severe
renal impairment (creatinine clearance < 60 ml/min).
Acute conditions with the potential to alter renal function
such as dehydration, severe infection, shock. Intravascular
administration of iodinated contrast agents. Acute or
chronic disease which may cause tissue hypoxia such as
cardiac or respiratory failure, recent myocardial infarction,
shock. Hepatic impairment. Acute alcohol intoxication,
alcoholism. Lactation.

PRECAUTIONS General: Do not use in patients with type 1
diabetes or for diabetic ketoacidosis. **Pancreatitis:** Post-
marketing experience - spontaneously reported adverse reactions
of acute pancreatitis. Inform patients of the symptom
of acute pancreatitis: persistent, severe abdominal
pain. Resolution of pancreatitis has been observed after
discontinuation of sitagliptin, but very rare cases of
necrotizing or haemorrhagic pancreatitis and/or death
have been reported. If pancreatitis is suspected, 'Janumet'
and other potentially suspect medicinal products should
be discontinued. Lactic acidosis: a very rare, but serious,
metabolic complication can occur due to metformin
accumulation. Cases in patients on metformin have
occurred primarily in diabetic patients with significant renal
failure. Reduce incidence by assessing other associated risk
factors. If suspected, discontinue treatment and hospitalise
patient immediately. **Renal function:** metformin-related
lactic acidosis increases with the degree of impairment of
renal function. Determine serum creatinine concentrations
regularly, i.e. at least once a year in patients with normal
renal function and at least two to four times a year in
patients with serum creatinine levels at or above the upper
limit of normal and in elderly patients. Decreased renal
function in elderly patients is frequent and asymptomatic.
Exercise special caution where renal function may become
impaired, e.g. when initiating antihypertensive or diuretic
therapy or when starting treatment with a non-steroidal
anti-inflammatory drug (NSAID). **Hypoglycaemia:** patients
receiving 'Janumet' in combination with a sulphonylurea or
with insulin may be at risk for hypoglycaemia. Reduction
of the dose of sulphonylurea or insulin may be necessary.
Hypersensitivity reactions: serious hypersensitivity reactions
have been reported including anaphylaxis, angioedema,
and exfoliative skin conditions including Stevens-Johnson
Syndrome. Onset occurred within first 3 months after initiation
of treatment with some reports occurring after the first
dose. If suspected discontinue 'Janumet', assess for
other potential causes and institute alternative treatment
of diabetes. **Surgery:** due to metformin hydrochloride content
of 'Janumet', discontinue treatment 48 hours before elective
surgery with general, spinal or epidural anaesthesia. Do not
resume earlier than 48 hours afterwards and only after renal
function is normal. **Change in clinical status of patients with**
previously controlled type 2 diabetes: Evaluate promptly for

evidence of ketoacidosis or lactic acidosis in any patient
with type 2 diabetes previously well controlled on 'Janumet'
who develops laboratory abnormalities or clinical illness
(especially vague and poorly defined illness) if acidosis of
either form occurs, stop 'Janumet' immediately and initiate
corrective measures. **Drug interactions:** Alcohol: avoid
alcohol and medicinal products containing alcohol due to
risk of lactic acidosis. Cationic agents that are eliminated by
renal tubular secretion (e.g., cimetidine): these may interact
with metformin by competing for common renal tubular
transport systems. Consider close monitoring of glycaemic
control, dose adjustment within the recommended posology
and changes in diabetic treatment when these agents are
co-administered. Iodinated contrast agents in radiological
studies: intravascular administration of these agents may
lead to renal failure, resulting in metformin accumulation
and a risk of lactic acidosis. Discontinue 'Janumet' prior
to, or at the time of the test and do not reinstitute until 48 hours
afterwards, and only after renal function is found to
be normal. **Combination requiring precautions for use:**
glucocorticoids (given by systemic and local routes) beta-2-agonists, and diuretics have intrinsic hyperglycaemic
activity. Inform the patient and perform more frequent
blood glucose monitoring, especially at the beginning
of treatment. If necessary, adjust dose of the anti-
hyperglycaemic medicine during therapy with, or on
discontinuation of the other medicine. ACE-inhibitors: as
these may decrease the blood glucose levels, if necessary,
adjust dose of the anti-hyperglycaemic during therapy
with, or on discontinuation of the other medicine. **Effects of**
other medicinal products on sitagliptin: low risk of clinically
meaningful interactions with other medicinal products
and ciclosporin. Meaningful interactions would not be
expected with other p-glycoprotein inhibitors. The primary
enzyme responsible for the limited metabolism of sitagliptin
is CYP3A4, with contribution from CYP2C8. **Effects of**
sitagliptin on other medicinal products: Digoxin: sitagliptin
had a small effect on plasma digoxin concentrations, and
may be a mild inhibitor of p-glycoprotein in vivo. No dose
adjustment of digoxin is recommended, but monitor patients
at risk of digoxin toxicity if used together. **Pregnancy and**
Lactation: Do not use during pregnancy. If a patient wishes
to become pregnant or if a pregnancy occurs treatment
with Janumet should be discontinued and switched to
insulin treatment as soon as possible. Do not use during
breast-feeding. **SIDE EFFECTS** Refer to SmPC for
complete information on side effects There have been no
therapeutic clinical trials conducted with 'Janumet' tablets
however 'Janumet' is bioequivalent to co-administered
sitagliptin and metformin. **Sitagliptin and metformin:**
Common (≥ 1/100 to < 1/10): nausea; Uncommon
(≥ 1/1,000 to < 1/100): blood glucose decreased; somnolence;
diarrhoea; upper abdominal pain; anorexia; weight
decreased. **Sitagliptin with metformin and sulphonylurea:**
Very common (≥ 1/10): hypoglycaemia; common (≥ 1/100 to
< 1/10): constipation. **Sitagliptin with metformin**
and a PPAR-γ agent (rosiglitazone): common
(≥ 1/100 to < 1/10): headache, diarrhoea, vomiting,
hypoglycaemia, peripheral oedema. **Sitagliptin with**
metformin and insulin: Very common (≥ 1/10): hypoglycaemia;
Uncommon (≥ 1/1,000 to < 1/100): headache, dry mouth.
Additional information on the individual active substances
Sitagliptin: in studies of sitagliptin 100 mg once daily alone
compared to placebo, drug-related adverse reactions
reported in patients treated with sitagliptin in excess
(> 0.2% and difference > 1 patient) of that in patients receiving
placebo are headache, hypoglycaemia, constipation, and
dizziness. Also adverse events reported regardless of
causal relationship to medication and more commonly in
patients treated with sitagliptin, included upper respiratory
tract infection, nasopharyngitis, osteoarthritis and pain in
extremity. **Metformin:** Clinical Trial Data and Post-marketing
data: Very common (≥ 1/10): gastro-intestinal disorders;
Common (≥ 1/100 to < 1/10): metallic taste; Very rare
(< 1/10,000): urticaria, erythema, pruritus; lactic acidosis;
vitamin B12 deficiency; liver function disorders, hepatitis.
Post-marketing data: the following additional adverse
reactions have been reported (frequency not known):
hypersensitivity reactions including anaphylaxis,
angioedema, rash, urticaria, cutaneous vasculitis, and
exfoliative skin conditions including Stevens-Johnson
syndrome (see precautions); acute pancreatitis, including
fatal and non-fatal haemorrhagic and necrotizing pancreatitis
(see precautions); impaired renal function, including acute
renal failure (sometimes requiring dialysis); vomiting.

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THE OBLIQUE VIEW

Writing the date in Latin was an exercise in itself, as each day related to its position relative to fixed points in the Roman month, namely the Nones (the fifth day) and the Ides (the thirteenth). N.B. (*nota bene*), this does not apply to all months of the year. As we used to recite *ad nauseam*, "March, July, October, May, make Nones the seventh and Ides the fifteenth day".

Relevance

Is it relevant? Judging by the blank expressions I got earlier this year when I embarked upon a particularly complex percutaneous coronary intervention (PCI) list and warned the lab staff that it was the *Ides of March*, I doubt it. But you will have noticed in the paragraphs above that many Latin phrases have assumed a day-to-day role in our own language, and Medicine is no exception.

We write the letter 'c' as a short version of *cum* meaning 'with', and talk about *mane* for procedures scheduled for the next morning. We prescribe drugs to be taken as o.d., b.d. or t.d.s., perhaps oblivious to their classical origins. Similarly, abbreviations such as e.g., et al., i.e. and etc., all started the same way and the annotated 'R' that we use as an abbreviation to indicate treatment, originates from recipe, the imperative form of the verb recipere, meaning 'take'.

As for Cardiology, some still refer to the ramus *intermedius* as it leaves the left main stem, let alone to it being full of *atheroma* (from Greek, via Latin and meaning 'porridge' or 'gruel')

Understanding

Did studying Latin help with my medical career? Probably not, but it was enormous fun. It also provided an opportunity to glimpse at a small aspect of the past and the origins of so much of our language. And anyone who likes to write, or talk, or to communicate generally (which I guess applies to me) may do so with a richer understanding of from when and where their words have come.

And be in no doubt that the study of Latin pertains to the modern interventional era as well. As Julius Caesar famously announced in 47 BC after succeeding in a short war in Turkey, and encountering a patient with severe and inoperable aortic stenosis, "*Veni vidi, TAVI*" ●

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