Letters

GP researchers need support and guidance in designing studies and in reporting their findings, including from journal editors and reviewers

The report by Eaton et al of their interesting study is spoiled by the poor presentation of its findings, for which I hold the editors of the *Australian Journal of General Practice* (*AJGP*) and the reviewers of this article as responsible as the authors.[1]

The title 'Not just tachycardia: A pilot study examining woundhealing complications associated with the dose and volume of lignocaine in skin cancer excisions' misdescribes this as a pilot study. The role of pilot studies is to test the assumptions for a planned study and 'should focus on feasibility, process, and description, as opposed to group-to-group comparison of outcomes'.[2]

'Aesthetic' (Table 1) is not a histological finding. Those four cases would have been better included in 'Other'.

The actual injectable medicines used are not clearly described, including whether adrenaline was used. How was the volume injected measured or estimated?

The main problem in this article is the presentation of *P* values alone in many places, which implies that they are important, useful and tell us whether the findings matter. The *P* value is a mathematical concept that says: 'Assuming that there was no difference between the groups, what is the likelihood of seeing a difference more extreme than that which we observed?' In this study as in many, and particularly in intervention studies, we expect that the groups *will* differ, so the initial assumption of no difference in the calculation of the *P* value makes it an inappropriate test.[3]

We want to see the effect size, which is the actual difference between the before and after results, and then an estimate of the precision of that finding, usually shown as a confidence interval. The article does report some effect sizes but no estimates of the precision of those effect sizes.

'Statistical significance' is a mathematical concept that has no meaning in the real world,[4] and it should no longer be used.

I would have hoped that the authors, and anybody who helped them with the presentation of the findings, would have presented their results more appropriately, with advice from the editors of the *AJGP* and the reviewers. I am concerned that this article's presentation sets a poor example to readers who might submit their own articles in the future.

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Competing interests: None.

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Reply: Valuable guidance in achieving clinical significance

Thank you for your thought-provoking engagement with the work 'Not just tachycardia: A pilot study examining woundhealing complications associated with the dose and volume of lignocaine in skin cancer excisions'. I respond firstly regarding specific items and secondly by addressing your primary critique of *P* values.

'Pilot study' was chosen as the format of the published work as explained in the 'Limitations' and 'What comes next?' sections.[1] Our paper concludes that the methodology of this study should be iterated upon to produce a work that produces clinically significant outcomes, thus meeting your quoted criteria of a pilot study.

'Aesthetic' as a category is a holdover from how the dataset was assembled, which collected data on in-clinic justification for removal, such as concern for skin cancer or unpleasant appearance, so that it might be compared to histological diagnosis. As this outcome was not utilised in the final paper, you make an excellent point to its irrelevance to the study as presented.

Adrenaline was included in all excisions as stated in the 'Participants and data collection' section.[1]

Finally, your commentary upon *P* values has merit – they are overwhelmingly influential in biomedical literature, despite being an arbitrary mathematical threshold.[2] Your letter has been a welcome invitation to read further into alternative presentations of data, including from your own research. Given this, we would welcome your insight on future research to present data in effect size, and Bayesian or confidence intervals. Doing so would make easier the transition from page to practice, to achieve the elusive clinical significance.

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Competing interests: None.

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Editorial reply

Dear Dr Frank,

Thank you for your correspondence. In your letter, you appropriately raise concern over *P* values alone being presented in the results of a recent publication. The issue expressed is that reporting on *P* values alone is not representative of what analytic research is trying to achieve – measuring and expressing the effect of an intervention. We agree with this assertion.

Most analytic research (both experimental and observational) submitted to *AJGP* should ideally include a point estimate/effect size (relative risk or odds ratio or similar) with a confidence interval (or similar). It is part of the role of editorial staff, peer reviewers and our soon-to-be-formed Expert Editorial Panel to assist authors in presenting their data in the most meaningful and applicable way.

We appreciate your correspondence in raising this important topic.

Sincerely,
AJGP Editor-in-Chief

Author

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A response to 'Acute onset of inflammatory papules, pustules and nodules on the central face in a middle-aged man

We feel the diagnosis offered in the case study titled 'Acute onset of inflammatory papules, pustules and nodules on the central face in a middle-aged man' is incorrect.[1] The authors present this as a case of rosacea fulminans (pyoderma faciale). This is a condition that is typically a disease of younger women, who present with acute onset of papules, pustules, cysts, and painful coalescing nodules and centrofacial erythema.[2] Usually, there is no preceding history of skin issues.

The authors rightly point out that rosacea fulminans is a clinical diagnosis. This gentleman has little to suggest this diagnosis. He has only moderately severe disease, with inflammation and pustules confined to the centrofacial area. The authors describe rhinophyma, and this is confirmed in the image provided. This means that he has had rosacea for some years at least.

When compared to rosacea fulminans, he has a background of rosacea, his gender is atypical and the disease severity is too mild. We can thus make a confident diagnosis of a typical acute exacerbation of longstanding rosacea. This is a common event, with numerous recorded triggers, including heat, sun exposure, alcohol, spicy foods and medications.[3]

Differential diagnoses are proposed that are very unlikely in the face of the features seen. Infection is suggested despite the fact the condition affects both cheeks, is typical of rosacea, and the patient is afebrile and not unwell. Lupus is mooted as a possible differential, yet the condition is pustular. Skin malignancy and mycosis fungoides are put forward as possible differentials for this pustular disorder. These are clearly untenable. A biopsy would not usually be performed with this presentation but in the case study does support rosacea.

We would question the logic of using doxycycline in this gentleman. Given the provisional diagnosis of rosacea fulminans, isotretinoin was an obvious agent to consider. This is contraindicated in conjunction with doxycycline. A more logical choice would have been erythromycin, which is useful in rosacea and can be safely given with isotretinoin.[4] It is considered to reduce the risk of post-isotretinoin flaring of pustular skin conditions.[5]

Isotretinoin is well established as a treatment for rosacea,[6] so the patient response here is expected and does not support a diagnosis of rosacea fulminans. From the documentation and images provided, we feel it is very unlikely he would have needed to be exposed to the hazards of oral steroids.

We feel it is important that this typical presentation of an acute flare of rosacea not be represented as rosacea fulminans (pyoderma faciale). This could lead to over-treatment for this, typically, easily controlled condition.

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Competing interests: None.

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Reply

Rosacea is a chronic inflammatory skin condition with four main subtypes: erythrotelangiectatic, inflammatory papules and pustules, phymatous and ocular.

Pyoderma faciale is a rare variant of rosacea. It was first believed to be an extreme form of inflammatory rosacea in 1992.[1] However, the papulopustular (inflammatory) rosacea often represents chronic inflammatory papules and pustules presenting long term in an episodic flare-up fashion with some known triggers.[2]

In this case study, although there is clinical evidence to suggest previous phymatous rosacea, the absence of previous episodes

of inflammatory eruption does not favour a flare-up of pre-existing popular rosacea. This is a case of a more severe and abrupt onset of significantly deeper inflammatory nodules and cysts, which seems suggestive of a different, and uncommon, presentation of rosacea called rosacea fulminans or pyoderma faciale. The presence of deep inflammatory nodules in pyoderma faciale (as seen in this case) is not a common finding in inflammatory rosacea. It is also different from acne with the absence of comedones.

While rosacea fulminans is traditionally reported in young post-adolescent female patients, it has been reported in other age groups too.[3] We believe it has been an under-reported condition in the literature.

Among the multiple topical and oral medications reported effective in the treatment of rosacea, oral doxycycline is often the first line in systemic treatment.[4] Although oral isotretinoin is an established and effective treatment, it is considered a specialist dermatologist treatment and is generally not open to primary care prescribers in Australia.[5]

The clinical significance of this case study is for general practitioners to be familiar with this uncommon variant of rosacea. This form of rosacea is different to the recognised pattern of inflammatory eruptions in chronic inflammatory rosacea by its sudden onset of deep inflammatory lesions as the first presentation in the individual.

Early diagnosis and referral to specialist centres to access oral isotretinoin will prevent scarring and further complications for patients.

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