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NEQAS parasitology scheme

The recent report of the NEQAS parasitology scheme by Hawthorne et al raised several points of concern. As a participant in both the main parasitology scheme and the parasitology included in the general haematology NEQAS, it seems to me that double standards are operating. The parasitology NEQAS for blood parasites has developed a complex scoring system that seems to be removed from clinical reality in relation to malaria. The haematology NEQAS asks us only for species identification or estimation of the parasitaemia in Plasmodium falciparum infections (the standard practice of the African laboratories that I have worked in).

In table 2 of Hawthorne’s paper the “correct” parasitaemia is given by the reference laboratory without 95% confidence limits to compare individual laboratories’ performance. This is obviously an important area for two reasons: as an assessment of the severity of infection; and as to whether further therapeutic intervention is necessary, such as exchange transfusion.

Confusing Plasmodium vivax for Plasmodium ovale is a common problem, but clinically less important because the therapeutic approach is usually the same. In routine practice we always look at both thin and thick films in this laboratory (the latter are not distributed as part of the NEQAS exercises). We usually also have the benefit of more clinical information and often multiple samples over a short period of time which can be of diagnostic use. Getting a sample to the laboratory is the most critical step for laboratory diagnosis; once malarial parasitaemia has been documented, there are relatively few problems. My plea is for one blood parasite scheme with a clinically reasonable scoring system.

Dr Guarino et al comment:

We find no contradiction between our interpretations and Dr Parsons’ statements. Some points, however, deserve specification. The conclusion drawn by Dr Parsons that the gastric lesion which we described is the result of extension of xanthogranulomatous cholecystitis is exclusive based on the finding of sinuses and fistulae formation in the case that has studied, none of which affected the stomach. Although we agree that adhesions to surrounding tissues are not uncommon in xanthogranulomatous cholecystitis, we in our case sinuses or fistulae were absent and, therefore, we find the comparison made by Dr Parsons inappropriate.

As we pointed out in our paper, we suppose that the gastric lesion may result by adhesion and deepening of the primary gall bladder forms that Dr Parsons that but there is no definite proof of such an event. Although the cellular mechanisms underlying the collection of xanthogranulomatous histocytes and other cellular elements is basically the same, the causes of xanthogranulomatous inflammation may be very different in various anatomic sites, suggesting caution in drawing general conclusions on aetiology.

Therefore, the conviction of Dr Parsons that the primary gastric lesion we studied certainly results from extension of xanthogranulomatous cholecystitis could be an oversimplification.

Finally, the objection made by Dr Parsons on the point of time does not carry any meaning, in our opinion. Indeed, even supposing that the gastric lesion originates from extension of primary xanthogranulomatous cholecystitis, the term xanthogranulomatous gastritis seems to be adequate and is as applicable as the extension to the colon of Crohn’s disease is named granulomatous colitis.

Dr Chiodini et al comment:

We are delighted to note that Dr Paul is enrolled in the parasitology scheme as well as the general haematology NEQAS. The schemes, however, have slightly different objectives. The haematology scheme distributes blood films four times a year and our communications with that scheme have indicated that the haematologists wish to maintain and sharpen diagnostic skills within the whole breadth of haematology. The inclusion of more blood parasite films to the parasitology scheme would thus be a bias out of proportion to the prevalence of such abnormal films in a district general hospital. Thus the level of input and sophistication of the scoring will inevitably differ between the haematology scheme and the parasitology scheme where the whole undertaking is devoted to blood parasites. Nevertheless, the parasitology scheme supplies both the material and the teaching sheets for the haematologists in respect of blood parasites. As I understand it, the haematologists do not have an actual score for their blood film reports, but the mailing is analysed by participant comments. Expert malaria diagnosis, however, is not a consensus of peer opinion but should be assessed against the actual material sent by the designated expert centre against which performers must match their attainment.

Parasitology scheme for species identification or estimation of the parasitaemia in Plasmodium falciparum infection (as do the haematologists). In addition, however, the parasitology scheme does expect an indication of which parasites are involved for example, gametocytes only of Plasmodium falciparum would be managed differently from trophozoites alone.

As for Dr Paul’s comment on parasitology, we have the 95% confidence limits for estimates of parasitaemia and participants are scored according to the difference in their report in terms of standard errors from the actual parasitaemia. We entirely agree with Dr Paul that this is an important area and that we are therefore disappointed with the poor performance of participants in this area.

We agree that thick and thin films would be an ideal specimen to send, but at the present time we are sending only obvious thin films and have to be realistic in terms of our expectations, particularly as performance, even with these films, is far from satisfactory. Another possible problem may be that thick films, even when stained are unfixed, and therefore additional concerns over biohazard would be raised.

In our routine practice we too have the benefit of more clinical information and multiple samples over a short period of time but this is clearly impractical when one is considering a NEQAS scheme and we have to accept that it is impossible to reproduce the exact clinical situation in any external scheme, though we feel that we do come close.

We feel that our scoring system is clinically reasonable and would like to point out that the NEQAS report for parasitology which the parasitology scheme reports gave the organiser permission to act on severity of clinical errors if it was felt that individual laboratories were scoring in such a way as to constitute a clinical danger. A scheme which takes account of significant errors in estimation of parasitaemia or missing potentially fatal infections such as Plasmodium falciparum is, we feel, clinically relevant. It is clear that Plasmodium falciparum and Plasmodium ovale have the same treatment and thus the severity of error here is less significant, but none the less we are aiming at precision and it is important for participants to know how well or otherwise they are doing.
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doi: 10.1136/jcp.46.6.581

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