Author reply to comments

Sir,
We appreciate the comments of Animesh Ray. However, majority of the points raised by him have already been alluded to in the review. Following is our reply to their remarks.

1. The conventional classification of chest tuberculosis (CTB) into primary and post-primary forms helps to understand the pathogenesis of the disease and its manifestations. Though there are typical imaging features described for both, nevertheless, there is considerable overlap in the radiological patterns, as already discussed in our article. Also, since the article focuses on imaging features, molecular studies are beyond the scope of the article.

2. As author et al. themselves state that chest radiograph (CXR) has high sensitivity, so it makes sense to employ it as an initial imaging modality, keeping in view its wide availability, low cost, and substantially less radiation. In a considerable proportion of patients, CXR along with clinical and laboratory findings would help to diagnose TB accurately and CT would be unnecessary. In the remaining patients where CXR is equivocal and/or the clinical and laboratory findings are non-contributory, CECT is justified and is the investigation of choice. Thus, CT cannot be advocated in all smear-negative patients. We agree that a section of patients (like those infected with retrovirus) usually need a CECT chest and abdomen to rule out TB (both pulmonary and extra-pulmonary) and other opportunistic infections. However, this was beyond the scope of the current article.

3. Sputum culture may be done along with smear microscopy where facilities are available and where smear examination is equivocal. We agree that Gene Xpert MTB/RIF serves as a helpful add-on test, especially in cases of smear-negative TB (because of its increased sensitivity) and to detect rifampicin resistance (in previously treated cases and contacts of drug-resistant TB patients). However, high costs and limited availability hamper the routine use. There is no definite data to justify its use in treatment-naïve, non-retroviral infected patients, and this test may have false-positive results due to detection of dead bacilli.

4. In case of radiological worsening of CTB and no definite clinical improvement, we have suggested doing a CT first to assess disease activity. This will also serve to rule out alternative diagnosis. If CT suggests residual disease activity, then intensive phase of ATT may be prolonged. At this point of time, other relevant investigations/therapies may be instituted to detect drug resistance and to treat any secondary infection. The point is well-taken that clinical/radiological worsening despite treatment should lead one to proceed with an exhaustive work-up to find the cause. We wish to highlight here that the suggested protocols may be modified depending on clinical judgment on a case-to-case basis.

5. It goes without saying that imaging findings are always interpreted in conjunction with clinical features. If there is high index of suspicion and in case of immunocompromised patients where there may be atypical radiological findings, other investigations such as bronchoalveolar lavage and tissue/fluid sampling frequently prove beneficial. Also, adequate work-up to rule out alternative diagnoses is essential in case of atypical imaging features.

The purpose of the suggested recommendations is to enable judicious use of imaging in diagnosis and follow-up of CTB patients, with the caveat that they may need to be customized to the given clinical situation.

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Conflicts of interest
There are no conflicts of interest.

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Seronegative spondyloarthropathy imaging: Looking at the past, hitting the future

Sir,

Further to the paper by Prakash et al. entitled “Seronegative spondylarthropathy-related sacroiliitis: CT, MRI features and differentials,” published in the 2014 September issue of the Indian Journal of Radiology and Imaging, we congratulate the authors and wish to make further comments.

The authors report the different CT and MRI features of seronegative spondylarthropathy, and state that conventional radiography is not a useful tool for early disease detection. We do agree that MR is the sole imaging modality permitting to depict bone marrow edema at the first stage of the disease before erosions and sclerosis appear. This belongs to the well-known and major ASAS criteria.

However, looking at the past, we assume that conventional radiology still has a place at the early-stage diagnosis. As a matter of fact, digital tomosynthesis is a low-radiation dose imaging means, a numerical revival of “conventional” tomography, which is available on a conventional remote-controlled radiology table. The extensive number of acquisition slices prevents from superimposition of anatomical structures, thus improving detection of tiny lesions such as bone erosions (Figure 1). Tomosynthesis may, therefore, definitely help in selecting patients requiring MRI examination of the sacroiliac joint to depict subchondral edema according to the ASAS criteria.

Looking at the future, PET scan may become a core diagnosis tool too. Although “standard” 18F-fluorodeoxyglucose [(18F) FDG] tracer may target and image inflammation such as the bone marrow edema areas, [(18F) fluoride tracer may highlight osteoblastic activity and bone remodeling in the areas of interest (Figure 2).

As bone remodeling is the key point of the “functional imaging” physiopathological process of inflammation that leads to joint ankylosis, [(18F) fluoride may better predict the patient’s prognosis than the other “morphological” imaging modalities, which do not reflect this dynamic process.

In conclusion, we believe that management of patient with

Figure 1(A-C): Standard radiography of the left sacroiliac joint. (A) No bony erosion could be detected (B) Tomosynthesis (coronal plane) and (C) CT scan (axial plane) examination discloses subtle subchondral erosions of the sacroiliac joints (arrows), whereas bone sclerosis (large arrow) is depicted on standard CT scan.

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References