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Letter to the Editor (Other)

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To stop or not to stop: what should we be doing with biologic DMARDs when patients undergo orthopaedic surgery?

Key message

- Management of biologic DMARDs in patients undergoing orthopaedic surgery is variable; flare avoidance is a priority.

Dear Editor, Biologic DMARDs (bDMARDs) have revolutionized the management of inflammatory arthritis. Although these drugs are highly effective for both RA and SpA, a significant proportion of patients on these drugs still require planned orthopaedic surgical intervention, including joint replacement [1]. Up to 44% of RA patients undergoing a joint replacement are reportedly taking bDMARDs [2] and are consequently at higher risk of infection. Indeed, the potentially severe consequences of infected metalwork can lead clinicians to err on the side of caution, often withholding bDMARDs perioperatively as a blanket rule for all patients. Unfortunately, interrupting therapy in this way often precipitates disease flares, which can significantly hinder postoperative recovery [2, 3].

The BSR guidelines recommend that surgery should be arranged the week after the next scheduled bDMARD dose [4]. However, there is no definitive evidence available, with only two meta-analyses published, both of which included only small cohort studies. Importantly, no randomized control trials have addressed whether bDMARDs should be stopped or continued perioperatively [2, 5–7]. There is clearly an unmet need for robust research to guide our clinical decision-making in this frequently encountered situation.

As such, we were interested in the views and current practices of key stakeholders: rheumatologists, orthopaedic surgeons and patients. We were interested specifically in clinical decision-making, guidelines and opinions on studies regarding the use of bDMARDs during the perioperative period.

We conducted a national survey by circulating anonymous questionnaires to consultant rheumatologists and orthopaedic surgeons asking them how they managed patients on bDMARDS in the perioperative period. Questionnaires were sent to 86 rheumatologists (20 hospitals, five regions in England) and 120 orthopaedic surgeons (30 hospitals, nine regions in England, two each from Wales and Scotland) working throughout the UK. We received completed questionnaires from 68 rheumatologists and 106 surgeons. They included a similar proportion of clinicians from University Teaching Hospitals and District General Hospitals. We also held two stakeholder focus group meetings, which included rheumatologists, orthopaedic surgeons and 12 people with inflammatory arthritis who were taking bDMARDs and had undergone orthopaedic surgery.

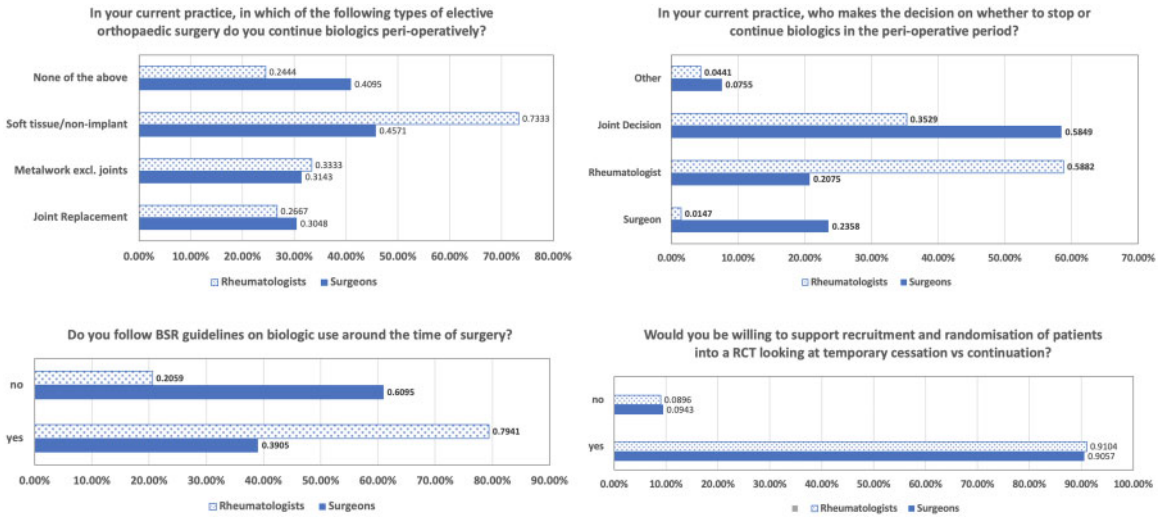
Survey respondents were asked, 'In your current practice, in which of the following types of elective orthopaedic surgery do you recommend continuing biologics perioperatively?'. They were given the response choices of 'joint replacement', 'use of metalwork excluding joint replacement', 'soft tissue/non-implant surgery', or 'none of the above'. The distribution of responses is shown in Fig. 1. Interestingly, up to one-third of respondents continue bDMARDs perioperatively in operations involving the insertion of metalwork, including joint replacements. Rheumatologists more frequently recommend continuing bDMARDs for soft tissue procedures (73% *vs* 45%), whereas recommendations are similar for both groups when considering procedures involving metalwork, including joint replacement.

The survey also asked, 'In your current practice, who makes the decision on whether to stop or continue biologics in the perioperative period?'. The majority of rheumatologists (40 of 68, 59%) stated that the decision is made by the rheumatologists. This differed from the surgeons, of whom 21% (22 of 106) stated that the rheumatologist made the decision. Conversely, 24% (25 of 106) of surgeons responded that the decision was made by the surgeon, as opposed to 1% (1 of 68) of the rheumatologists. The majority (62 of 106, 58%) of surgeons and 35% (24 of 68) of the rheumatologists stated that withholding/continuing bDMARDs was a joint decision.

Among the rheumatologists, 79% (54 of 68) follow current BSR guidelines. Out of the remaining 21% (14 of 68), 10 (70%) had local guidelines, with the remaining 29% following no specific guidelines. Only 39% (41 of 105) of the orthopaedic surgeons followed BSR or local guidelines. Ninety-one per cent of respondents would be willing to recruit to a randomized controlled trial.

Both focus group discussions centred on the trade-off between the risk of disease flare and risk of infection. Many of the participants had experienced flares when they had undergone surgery, and the majority expressed that they would be reluctant to stop their medication. Interestingly, some participants had noted that having stopped bDMARDs for surgery, these drugs were less effective when subsequently restarted. Overall, when informed that the risk of infection is thought to be ~3–7% [8], the participants felt that they would accept this risk

FIG. 1 Overview of survey responses according to job role



to prioritize the prevention of flares. All focus group members were asked whether they would be willing to partake in a randomized controlled trial to compare stopping or continuing bDMARDs perioperatively. The majority (8 of 12) felt that they would agree to randomization within a trial.

These data highlight considerable variation in perioperative bDMARD practice among rheumatologists and orthopaedic surgeons. A significant proportion choose to continue therapy. Likewise, patients are keen to continue bDMARDs perioperatively, often prioritizing the avoidance of flare over potential risk of infection. Current guidelines are not based on trial evidence; our survey data suggest a strong appetite for multicentre randomized controlled trials in this area from patients, rheumatologists and orthopaedic surgeons alike.

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Data availability statement

Data are available upon request.

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