Factors influencing uptake of influenza vaccination in patients with rheumatoid arthritis

M J Bridges, D Coady, C A Kelly, J Hamilton, C Heycock

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Recent British Society for Rheumatology (BSR) guidelines[1] have advised that all patients with rheumatoid arthritis (RA) receiving methotrexate (MTX), cyclosporin A, or azathioprine should receive an annual influenza vaccination. Because there are relatively few data about immunisation rates in patients with RA, we undertook a study with the following aims: (*a*) to document the rate of uptake of influenza vaccine in patients with RA; (*b*) to assess the degree of conformity to the BSR guidelines; (*c*) to explore the factors that influence vaccine uptake.

One hundred and twenty nine consecutive patients with RA were assessed between September 2001 and February 2002 during their routine hospital outpatient appointment. At the end of the consultation, the doctor inquired about vaccination status using standardised questionnaires. Information about whether the patient had been immunised during the previous 12 months was based on the patient's self report. Other data collected from the case notes and by direct questioning included age, year of diagnosis, duration of RA, presence or absence of rheumatoid factor (RF), drugs taken, and presence of other recognised indications for influenza vaccination. Table 1 shows the demographics of the 129 patients questioned.

Of the 114 patients receiving disease modifying antirheumatic drugs (DMARDs), 59 were taking MTX, 4 azathioprine, and 58 other DMARDs. No patients were taking cyclosporin A, and 7 patients were taking a combination of DMARDs. In total, 73 (57%) of the patients with RA had received the influenza vaccine in the previous 12 months.

Awareness of vaccination by patients who had received it came from different sources, and is shown in table 2. Advice about immunisation mainly came from primary care, with the secondary care sector contributing little to patient information.

The commonest reason cited by patients for non-uptake of vaccination were: "never offered vaccine" (42%), "concerns over side effects" (19%), beliefs of vaccine inefficacy (10%), and "not aware of need" (5%); 24% of patients quoted other reasons.

Thirty three (56%) patients taking MTX had received the influenza vaccine. No patients were taking cyclosporin and only four patients were taking azathioprine, so no meaningful comparison could be made with BSR guidelines for these drugs.

Table 1 Demographic characteristics of the patients with RA. Results are shown as No (%)

Number	129	
Women	89	(69)
Mean age (years)	59.4	
>65 years	44	(34)
Mean disease duration (years)	8.0	
RF positive	93	(72)
Receiving DMARDs	114	(88)
Receiving corticosteroids	14	(11)
Ischaemic heart disease	11	(9)
Diabetes mellitus	4	(5)
Chronic pulmonary disease	16	(12)
Chronic renal disease	1	(1)
Chronic liver disease	1	(1)

Table 2 Source of information about vaccination for the 73 patients with RA who had been vaccinated. Results are shown as No (%)

	Influenza vaccinee
GP	52 (71)
Practice nurse	12 (16)
Hospital doctor	7 (10)
Rheumatology nurse	0
Family/friends	2 (3)

Patients with ischaemic heart disease (IHD) were more likely to receive vaccine than those without it (odds ratio (OR)=8.44 (95% confidence interval (95% CI 1.04 to 68.03)), as were patients with chronic pulmonary disease (OR=6.18 (95% CI 1.34 to 28.47)), and patients receiving corticosteroids (OR=5.13 (95% CI 1.10 to 23.95)). Neither use of DMARDs, nor the presence of RF influenced uptake of the influenza vaccine (OR=0.45 (95% CI 0.14 to 1.50)), and (OR=1.62 (95% CI 0.75 to 3.51), respectively).

This study relied on patient's recall about whether they had been vaccinated or not, and this was a potential source of inaccuracy.

The uptake of influenza vaccination in patients with RA taking MTX in this study was 56%, and we consider this result to be suboptimal. The principal reason for this seems not to be a lack of awareness of the need for vaccination by the patient, but the fact that they have not been offered it. Hospital doctors and rheumatology nurses at present do not seem to be identifying such patients in large numbers, with most vaccinees being identified by their primary care doctor. Secondary care professionals could also deal with patient concerns over the efficacy and safety of such vaccines, which are influencing 24% of non-vaccinees.

In conclusion, this study shows that uptake of influenza vaccine in patients with RA taking MTX is suboptimal. Reasons for the shortfall are patient concerns over side effects, beliefs of vaccine inefficacy, and the fact that the patients are not being offered the vaccine in the first place. We believe that secondary care has a role in allaying patient concerns and improve adherence to BSR guidelines.

Authors' affiliations
M J Bridges, C A Kelly, J Hamilton, C Heycock, Queen Elizabeth Hospital, Sheriff Hill, Gateshead, Tyne and Wear NE9 6SX, UK
D Coady, Freeman Hospital, High Heaton, Newcastle-on-Tyne, Tyne and Wear NE7 7DN, UK

Correspondence to: Dr M J Bridges, Department of Rheumatology, James Cook University Hospital, Marton Road, Middlesborough TS4 3BW, UK; drmattbridges@hotmail.com

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