Two cases of serious food-borne infection in patients treated with anti-TNF-α. Are we doing enough to reduce the risk?

Sir, We would like to report two cases of serious food-borne infection in patients receiving anti-TNF-α drugs, review previous case reports and suggest that the delivery of appropriate food hygiene advice to patients prescribed these drugs could be important.

Case 1 was a 65-yr-old man with ankylosing spondylitis and chronic renal failure (serum creatinine stable at 190 μmol/l) due to NSAID-induced interstitial nephritis. He had been receiving infliximab infusions at 5 mg/kg once every 8 weeks for the previous 11 months. Treatment had been successful in reducing symptoms, improving function and reducing his dependence on indomethacin. He presented with a 7-day history of fever and watery diarrhoea, which started a week after an infliximab infusion. On examination his temperature was 37°C, pulse was 90 beats/min and blood pressure 154/90 mmHg. His left knee was swollen, warm and markedly tender with gross limitation of movement. No synovitis was obvious in other joints. Blood tests showed a white cell count of 12.4 × 10⁹/l with neutrophilia; ESR was 52 mm/h and CRP 153 mg/l. Initial analysis of joint fluid showed no evidence of organisms on Gram staining and culture. A second synovial fluid aspirate 1 week later grew Salmonella; however, blood and stool cultures were negative for Salmonella. Further questioning revealed that the patient regularly obtained hens eggs directly from a nearby farm and had recently eaten partly cooked eggs. Management consisted of initial bed rest, analgesia, arthroscopic suction aspiration and injection of gentamicin. She remains well, with no evidence of recrudescence of the joint sepsis 4 months later.

These two serious infections are likely to have been transferred from food sources. L. monocytogenes can be found in uncooked meat and vegetables, unpasteurized milk or foods prepared from raw milk [1]. Contamination of some foods, such as hot dogs and delicatessen meats, can occur during packaging. L. monocytogenes can be spread through contaminated raw eggs, in prepared foods. Salmonella can be spread through contaminated raw eggs, in unpasteurized milk and in under cooked meat. Two cases of Salmonella septic arthritis were reported to the BSR Biologic Register [6]. Both of these patients were receiving etanercept. Katsarolis et al. [7] have reported a case of septic arthritis caused by Salmonella enteritidis in a patient receiving infliximab for RA. Netea et al. [8] have also reported two cases of Salmonella septicaemia in RA patients during anti-TNF-α therapy.

Food-borne infection from typical identifiable sources might be avoided with appropriate knowledge and advice. There are two main risk issues. The first is consumption of food that is typically known to have a high risk of specifically carrying and spreading potentially infectious organisms. This includes soft cheese contaminated with Listeria and eggs carrying Salmonella. The second issue—and a more general phenomenon—is transfer or spread of potentially infective organisms from poorly prepared foods. Listeria infection (1.5 cases per million/yr), though relatively rare in the general population, has clearly made an impact in patients treated with anti-TNF-α drugs. Salmonella infection is more common than Listeria infection in the general population (11 cases/1000 people/yr in UK, European and North American populations [9]) and therefore potentially poses a greater risk burden.
In addition the potential risk of food-borne infection might be higher from foods obtained directly from farm producers—popular with consumers in rural areas—where food hygiene and preparation may not be reliable or monitored less stringently than by high-volume producers and retailers. Accordingly, it would be interesting to know whether there may be a relatively specific rural food-borne infection risk in anti-TNF-α-treated patients for which targeted advice can be given.

The ARC leaflets and the recent guidelines for anti-TNF-α therapy do not carry food hygiene advice. To reduce the risk of Listeria and Salmonella infections specifically in patients taking anti-TNF-α drugs, we propose that the following advice could be given [10].

Do not eat soft cheeses such as Feta, Brie, Camembert, blue-veined or Mexican-style cheeses, unless they have labels that clearly state they are made from pasteurized milk.

Do not eat refrigerated pâtés or meat spreads. Canned or shelf-stable pâtés and meat spreads may be eaten.

Avoid drinking unpasteurized milk and eating raw eggs, and cook the food to the proper temperatures.

Avoid eating hot dogs, luncheon meats or delicatessen meats, unless reheated until steaming hot.

In addition, patients being prescribed anti-TNF-α therapy might be referred to general food hygiene advice carried by some popular cookery books, speciality publications and on the internet.

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Letters to the Editor

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Renal tubular acidosis, arthritis and autoantibodies: primary Sjögren’s syndrome in childhood

Sir, Primary Sjögren’s syndrome (PSS) is rare in the paediatric population [1, 2]. We describe an 8-yr-old female who presented with arthritis, distal renal tubular acidosis and an autoantibody profile suggestive of Sjögren’s syndrome without sicca symptoms.

An 8-yr-old female first presented in November 2004. Her symptoms started 9 months previously with swelling, pain and morning stiffness of her left ankle and knee, and pain in her wrists and hands. She was treated with ibuprofen and started physiotherapy. The pain improved but stiffness remained. In the following 9 months she had intermittent pain and swelling of her left ankle and knee with persistent pain and swelling of her wrists and hands, with morning stiffness until lunchtime. She had a poor appetite and no energy but no history of rashes, pyrexia, mouth ulcers or hair loss. She had a history only of eczema and no family history of note.

On examination, her weight and height were on the 50th centile. Skin, mouth and nails were normal but she had evidence of dental caries. The rest of the systemic examination was normal. She had evidence of multiple swollen joints. All PIPs, all DIPs, both wrists and ankles showed evidence of active synovitis. She was unable to make a fist and wrist flexion and extension were restricted to 50%.

Initial investigations revealed mild anaemia, raised platelet count and erythrocyte sedimentation rate (iu/ml). She had an autoantibody profile on two occasions 6 months apart. Her rheumatoid factor titre was extremely high. Antinuclear antibody was positive on both occasions, and double-stranded DNA was positive on one occasion (77) and equivocal on the second occasion (45). Both anti-SS-A(Ro) and anti-SS-B(La) were positive on both occasions (Table 1). She received three pulses of methylprednisolone (20 mg/kg) on three consecutive days and was started on oral methotrexate (10 mg/m²). She also received intensive physiotherapy and occupational therapy.

She was reviewed 2 months later. Her energy levels had improved but she continued to have a poor appetite. On examination, she had widespread active synovitis as before and had had only temporary respite after the pulsed methylprednisolone.

Table 1. Significant investigation results

<table>
<thead>
<tr>
<th>Variable (normal value)</th>
<th>May 2004</th>
<th>October 2004</th>
<th>January 2005</th>
</tr>
</thead>
<tbody>
<tr>
<td>Haemoglobin, g/dl (120–160)</td>
<td>10.7</td>
<td>10.2</td>
<td>11.3</td>
</tr>
<tr>
<td>White cell count, ×10⁹/l (4–10)</td>
<td>5.6</td>
<td>9.1</td>
<td>5.8</td>
</tr>
<tr>
<td>Neutrophils, ×10⁹/l</td>
<td>3.0</td>
<td>5.8</td>
<td>4.67</td>
</tr>
<tr>
<td>Lymphocytes, ×10⁹/l</td>
<td>2.1</td>
<td>2.88</td>
<td>0.75</td>
</tr>
<tr>
<td>Platelets, ×10⁹/l (150–400)</td>
<td>372</td>
<td>502</td>
<td>458</td>
</tr>
<tr>
<td>Erythrocyte sedimentation rate (ml/hr) 0–10</td>
<td>89</td>
<td>93</td>
<td>67</td>
</tr>
</tbody>
</table>

Autoantibodies

- Rheumatoid factor Positive Positive Positive
- Antinuclear antibodies Positive Positive Positive
- Double-stranded DNA Positive Positive Positive
- Extracuclear antigens Positive Positive Positive
- Anti-SS-A(Ro) Positive Positive Positive
- Anti-SS-B(La) Positive Positive Positive