Expert Forum

TREAT-TO-TARGET IN RHEUMATOID ARTHRITIS

Recommendations of a New Zealand consensus group

Making Education Easy

15th October 2010

Agenda items

- ***The Treat-to-Target initiative***
  – Dr Andrew Harrison
- ***Treat-to-Target: How does New Zealand compare with other countries?***
  – Associate Professor Lisa Stamp
- ***Panel discussion & open forum***
- ***Treat-to-Target case studies & discussion***
  – Dr Doug White
- ***Targets and their role in rheumatology***
  – Dr Simon Stebbings
- ***Joint count calibration workshop***
  – Dr Michael Corkill

About Expert Forums

Expert Forum publications are designed to encapsulate the essence of a local meeting of health professionals who have a keen interest in a condition or disease state.
These meetings are typically a day in duration, and will include presentations of local research and discussion of guidelines and management strategies.

Even for local events it is not always possible for everyone with a similar therapeutic interest to attend. Expert Forum publications capture what was said and allows it to be made available to a wider audience through the Research Review membership or through physical distribution.

Welcome to this review of the inaugural Rheumatology 2010 Treat-to-Target meeting, held in Auckland.

This national meeting formed part of the international Treat-to-Target initiative in rheumatology and aimed to ratify the key tenets of the initiative in the local New Zealand arena, through the consensus of New Zealand rheumatologists. This educational summary reports the discussions and views of the group in the context of evidence presented at the meeting.

Introduction

In 2008 an International Steering Committee consisting of rheumatologists with expertise in both treating rheumatoid arthritis and conducting clinical trials, was formed and led by Professor Josef Smolen.[1] Participants were drawn from European and North American centres. The objective of this taskforce was to formulate a consensus on a set of recommendations aimed at improving the management of rheumatoid arthritis in clinical practice, hence providing a guide for treatment to target. Consensus findings were based on evidence provided by a systematic literature review[2] in accordance with European League Against Rheumatism (EULAR) standardised operating procedures. Provisional recommendations were then presented for discussion and amendment, and voted on by an expert panel of 60 rheumatologists from Europe, North America, Latin America, Japan & Australia, along with five patient representatives. The category of evidence and strength of each recommendation were determined and categorised as 'A' highest and 'D' lowest on the basis of the systematic literature review as ratified by the Steering Committee. In all, 10 recommendations were developed.

In 2010 New Zealand became one of the 49 countries involved in the Treat-to-Target (T2T) process. A National Steering Committee was established, and led by Dr Andrew Harrison from Hutt Hospital, Wellington. Five rheumatologists, Dr Daniel Ching (Timaru), Dr Mike Corkill (Auckland), Dr Lisa Stamp (Christchurch), Dr Simon Stebbings (Dunedin) and Dr Doug White (Hamilton) formed the Steering Committee. A national meeting was convened on the 15th October with participation from a wide range of New Zealand rheumatologists in both public and private practice, together with patient representatives and representatives from Arthritis New Zealand, a non-government organisation advocating for patients with arthritis.

The purpose of the T2T meeting in Auckland was to ratify the key tenets of the T2T initiative in the local New Zealand arena through the consensus of New Zealand rheumatologists. In particular, the applications of the principles of T2T were to be discussed within the limitations of the New Zealand public health system. A further aim of the meeting was to standardise the assessment of joint inflammation and to review which assessment tools may be used to establish response to treatment in New Zealand.

Since joint counts form a major part of most tools for assessing activity in rheumatoid arthritis, the first New Zealand joint count calibration workshop was convened as part of the meeting.

The Treat-to-Target Initiative – Dr Andrew Harrison

T2T is not a new concept or one that is specific to rheumatology. The principle of treating to target is an approach to the prevention and management of many of the most prevalent diseases in society: including diabetes and hypertension. In diabetes for instance, the haemoglobin A1C (HbA1C) level can be used to monitor long-term fluctuations in glucose control. Monitoring blood pressure and treating hypertension effectively with drug treatment has been an important part of medical practice for 40 years.

The impetus for developing guidelines for the management of rheumatoid arthritis came from a desire to achieve remission in the disease through the use of effective therapies and hence improve the lives of patients. The first challenge was to define targets in rheumatoid arthritis, which are harder to delineate than for hypertension and diabetes. Increasing evidence shows that early aggressive treatment of rheumatoid arthritis can significantly improve function and quality of life.

The T2T process

The T2T process involved a comprehensive literature review and the use of a modified Delphi technique where each statement developed through the systematic review was voted upon in an anonymous fashion using a digital system. Statements supported by over 75% of voters were accepted, while those with <25% support were rejected outright. Others were subjected to a further round of discussion and subsequent voting.

The systematic review identified pre-defined targets for intervention (which were numeric) and seven core studies were drawn upon (one was available only as an abstract). Trials investigating the value of using pre-defined targets for therapeutic interventions and the therapeutic consequences for not reaching the target were chosen. Within the selected trials, a pre-defined target outcome where treatment was escalated if targets were not met was compared with usual treatment. Six core studies formed the basis of the recommendations.

Core studies identified were: TICORA[3]; CAMERA[4]; COBRA[5]; Fransen et al[6]; Symmons D et al[7]; Stenger AA et al[8].

Most of these core trials used disease activity as the target, where a defined 'low disease activity' was specified. Timeframes for assessment varied between one and four months. Most studies were performed in early rheumatoid arthritis and all the studies compared T2T with routine approaches and demonstrated the clinical benefits of T2T. The effects of T2T on functional and radiographic outcomes were less well defined by these studies and the Steering Committee felt this needed further investigation. The effects in established and late rheumatoid arthritis were also much less clear.

The four overarching principles of T2T were:

A. The treatment of rheumatoid arthritis must be based on a shared decision between the patient and the rheumatologist. This principle was agreed upon unanimously by the initial Delphi group.

B. The primary goal of T2T should be to improve qualify of life, reduce disability and control joint damage so that patients can normalise their function and social participation.

C. Abrogation of inflammation is the most important method to achieve these goals.

D. Treatment to target by measuring disease activity and adjusting therapy accordingly optimises outcome in rheumatoid arthritis.

Ten recommendations form the basis of the international T2T consensus and relate to the treatment of rheumatoid arthritis. These are based on evidence and expert opinion, and are as follows:

Recommendation 1

The primary target for treatment of rheumatoid arthritis should be a state of clinical remission.

Evidence 3c (83% agreement)

Recommendation 2

Clinical remission is defined as the absence of signs and symptoms of significant inflammatory disease.

Evidence 4d (76% agreement)

Recommendation 3

While remission should be a clear target, based on available evidence, low disease activity may be an acceptable alternative therapeutic goal, particularly in established longstanding disease.

Evidence 1b (77% agreement)

Recommendation 4

Until the desired treatment target is reached, drug therapy should be adjusted on review, which should occur at least once every three months.

Evidence 1b (agreement 77%)

Recommendation 5

Measures of disease activity must be obtained and documented regularly; as frequently as monthly for patients with high/moderate disease activity or less frequently (such as every 3–6 months) for patients in sustained low disease activity or remission.

Evidence 4d (agreement 53%)

Recommendation 6

The use of validated composite measures of disease activity, which include joint assessments, is needed in routine clinical practice to guide treatment decisions. (A variety of appropriate composite measures were chosen, including the Disease Activity Score [DAS], the Clinical Disease Activity Index [CDAI], and the Simplified Disease Activity Index [SDAI]).

Evidence 4c (93.4% agreement)

Recommendation 7

Structural changes and functional impairment should be considered when making clinical decisions, in addition to assessing composite measures of disease activity. This could include x-ray scores such as the Larsen or Sharp score and disability scores such as the Health Assessment Questionnaire (HAQ).

Evidence base 4d (79.6%agreement)

Recommendation 8

The desired treatment target should be maintained throughout the remaining course of the disease.

Evidence 3c (agreement 92%)

Recommendation 9

The choice of the composite measure of disease activity and the level of the target value may be influenced by consideration of comorbidities, patient factors and drug-related risks.

Evidence 4d (agreement 74.5%)

Recommendation 10

The patient has to be appropriately informed about the treatment target and the strategy planned to reach this target under the supervision of the rheumatologist.

Evidence 4d (agreement 90.6%)

The key concept in relation to T2T is that both remission and low disease activity are achievable goals with both current and future therapeutic agents available.

The T2T website (www.t2tweblog.com) provides discussion with regard to various composite measures of disease activity recommended by T2T including the DAS28, the CDAI and the SDAI, all of which have validated cut points for low disease activity and remission. DAS calculators are available on-line along with instruction on how to apply and use these measures. In New Zealand, the DAS28 is in widespread use and has been the subject of a multi-centre research project by Taylor et al.[9]

Dr Harrison concluded his talk with a brief discussion on how to use and calculate the various disease activity measures and which factors within these composite measures carry the most weight. In particular, it was noted how joint counts were a major factor in delineating remission and low disease activity.

Panel Discussion

One of the rheumatologists wondered whether in Austria, where Dr Smolen practices, there might be double the number of rheumatologists since considerable time is needed to perform composite measures in a busy clinic. Dr Harrison answered that measures such as the DAS28 were actually quite quick to perform and many New Zealand trainees were already using them routinely in their clinical practice.

Another rheumatologist suggested that C-reactive protein (CRP) could be used as an alternative to composite measures, but Dr Harrison noted that composite measures were those recommended both via the literature and through the expert T2T panel.

Another discussion topic related to the recommendations that monthly adjustments and monitoring of patients who were not in remission was recommended, and many respondents felt that this was simply not practical in the New Zealand public health system.

The final question posed related to when all options for treatment are exhausted, what recommendations would there be for further management? Andrew answered that adjusting the target to low disease activity was the answer to this rather than remission, which may not always be achievable, particularly in late and aggressive disease.

T2T – How does New Zealand compare with other countries? – Associate Professor Lisa Stamp

Dr Stamp set out to compare international experiences of T2T with a New Zealand survey, which included comparisons of Pharmac criteria for anti-TNF therapy and EULAR guidelines. In the New Zealand survey conducted by Andrew Harrison, 21 rheumatologists responded. Of these, seven were University appointments, nine were rheumatologists working in general hospitals and five were in private practice. The number of patients with rheumatoid arthritis seen by these rheumatologists over an average month varied between 25 and 140, with an average of 67.5 patients seen over this time period.

New Zealand rheumatologists were asked about their opinions regarding the 10 recommendations of the International T2T Committee. They were asked to rate each recommendation on a scale of 1 to 10, where 1 was fully disagree and 10 was fully agree. Participants were then asked to answer the question whether they applied this recommendation in their daily practice – never, not often, very often or always.

The results of this small survey showed striking comparability between New Zealand rheumatologists opinions relating to the 10 recommendations and those of both the international panel and of a Canadian survey. Some differences were apparent, particularly with recommendation 4 (*adjustment of therapy every three months is recommended until the desired treatment target is reached*) which was agreed on less firmly by New Zealand rheumatologists. In addition, recommendation 5 (*the desirability of a very frequent – monthly- review in order to maintain low disease activity and remission in patients with high disease activity*) was felt to be unachievable by around 60% of New Zealand rheumatologists, and this perhaps reflects pressures on the public health system in this country. Another area of slight disagreement with international consensus was the recommendation regarding the use of composite measures of disease activity. The frequency with which these are employed in a clinic situation in New Zealand seemed to be low in the survey. New Zealand rheumatologists were almost unanimous in supporting a strategy to plan treatment in conjunction with the patient and inform them of options.

No New Zealand rheumatologists said that they would change their practice as a result of the T2T recommendation. Both in New Zealand and Canada the main barriers to instituting the 10 recommendations of T2T were resources and a high clinical workload.

Lisa Stamp then went on to review the EULAR guidelines for the management of rheumatoid arthritis and to discuss how these might be applied in New Zealand in the context of T2T. The EULAR guidelines for treatment of rheumatoid arthritis suggest three phases of treatment.

Phase 1 following diagnosis: treatment with standard disease-modifying therapies – including methotrexate or leflunomide, sulphasalazine, gold and steroid are recommended. Such a practice would be consistent with that of most New Zealand rheumatologists.

Phase 2 suggests that failure of the initial standard Disease-Modifying Antirheumatic Drug (DMARD) therapy should lead to the addition of a biologic drug in those who have unfavourable prognostic factors. This would not be possible in New Zealand because of Pharmac restrictions on access to biologic drugs, which require a change of disease-modifying therapy and combination therapies prior to initiating treatment with a biologic agent.

Phase 3, where a biologic agent fails in combination with a synthetic disease-modifying therapy, a change of biologic drug is recommended. This is possible in New Zealand, where a change in anti-TNF therapy is permitted, but access to other biologics such as rituximab and tocilizumab is variable throughout New Zealand from centre to centre, leading to issues with 'postcode prescribing'.

Dr Stamp concluded that an inability to follow international standard guidelines due to Pharmac limitations on access to biologics puts patients in New Zealand at a disadvantage.

To summarise, Dr Stamp said that there was a considerable amount of agreement within the small survey that she performed amongst New Zealand rheumatologists with regard to T2T, which had much consensus with the international rheumatological community. The main differences were in areas to do with the assessment of disease activity and the methods used, and the frequency of monitoring. New Zealand and Canada seemed very similar. By and large EULAR recommendations could be adapted to New Zealand, although the restrictions on funding related to Pharmac funding criteria do disadvantage patients with early aggressive disease who fail standard disease-modifying therapies.

A discussion followed and it was mentioned that we were not in a position in New Zealand to follow international guidelines because of restrictions of access to a number of biologic agents. One rheumatologist pointed out that there was good evidence for combination disease-modifying therapy in accordance with recent reviews in Arthritis and Rheumatism. She felt that the position taken by some rheumatologists such as Josef Smolen, who is not a proponent of combination DMARD therapy, is not consistent with the evidence. Dr Stamp said that in her own practice she used early combination therapy in patients with a poor prognosis at the outset. This differed from Europeans who tended to focus on getting patients on to a biologic agent as early as possible and cycling through biologic options.

Panel Discussion & Open Forum

In this session, the principles of T2T were opened to discussion by members of the New Zealand Rheumatology Association (NZRA) and other attendees.

The first comment was from a rheumatologist who felt that there was an inherent problem within the New Zealand health system. His feeling was that patient throughput was valued more highly than the quality of the care given and that this was a difficult priority to counter with management. Andrew Harrison replied that the most difficult aspect of the T2T criteria was the frequency of follow-up for unstable patients, since delayed follow-up appointments were a common problem in many centres, including Wellington. In Wellington, a system of prioritisation for follow-ups on a 1 to 3 grading system had been developed which assisted with this. Patients who are stable were also monitored by telephone.

Another rheumatologist felt that patient-held records, diaries and notebooks could be a helpful way for patients to become involved in the management of their own disease.

It was felt that monthly monitoring suggested by T2T for unstable patients was far too frequent and that this timeline was not sufficient to gauge benefit from an individual treatment, and hence to guide therapy change.

A committee member suggested that patients could adjust their own treatment within pre-set guidelines as in diabetes mellitus. He had a number of patients whom he encourages to do this within protocols that he sets for them.

One of the patient partners in the audience felt that patients liked to be masters of their own disease and would be happy to record levels of pain they experienced and other symptoms.

Attention was drawn to the potential role for general practitioners (GPs). GPs could be involved in the management of patients, assess patient outcomes and vary treatment in accordance with pre-set guidelines. Andrew Harrison felt that GPs had less of a role in managing patients and that rheumatologists were increasingly taking control of their patients' long-term management.

A representative from Arthritis New Zealand asked how rheumatologists knew if patients were feeling engaged and involved in their own management. She felt that the 'balance of power' between the rheumatologist and the patient perhaps needed to be considered. One of the patient partners replied that patients often vary their medication without rheumatologists being aware of this. The representative replied that neighbours and friends often chat about different treatments and this is an important source of information for patients. Patients should be allowed some discretion in their own management.

Attention was also drawn to the slow-acting nature of many disease-modifying drugs and it was felt that it may be inappropriate for patients to vary their disease-modifying therapy because of this. This differs from diabetes where the effects of insulin on blood sugar are immediate. One of the rheumatologists replied that he tends to increase the dose of methotrexate rapidly and this has been a change in his practice. He gives patients instructions on how to increase their methotrexate dose and also copies these to their GP.

Another rheumatologist felt it was very important for the GP's role to be acknowledged, particularly in terms of monitoring blood tests and supervising the patient.

It was suggested that patients should at least be given action plans with an idea of what to do when they run into trouble rather than varying the drug doses themselves. This should include advice on when to contact their department and an explanation of the signs of a flare. If they are given guidance of when and whom to contact this would be very useful.

The panel was asked about x-ray changes and erosive progression and whether this was used as a guide by clinicians to increase therapy. There was a range of replies to this. Whilst most rheumatologists felt that yearly x-rays early in the disease might be helpful, this was not uniformly achieved and it was felt that later in disease this would be less helpful to guide treatment.

Andrew Harrison posed a question to the group about the length of time consultants had for follow-up appointments. This varied from between 10 and 30 minutes with most consultants having 15 to 20 minutes for follow-up, except in private practice where times were a little longer on average.

It seemed from a show of hands that the longer the time available for follow-up, the more likely the clinician was to perform a DAS28 or similar score.

One of the participants championed the use of the SDAI and CDAI, which he felt might be quicker to perform than the DAS28.

Andrew Harrison discussed the Pharmac criteria for access to biologic agents with respect to the EULAR guidelines and wondered whether the NZRA should be approaching Pharmac to change access criteria to anti-TNF agents in the light of these recommendations. Based on local experience related to improvement in validated composite measures he felt that in New Zealand methotrexate and leflunomide in combination were the 'poor man's biologic agent'. It was pointed out that in Europe this combination was not used and that Josef Smolen was very much against this combination.

One of the rheumatologists mentioned that many patients would not be able to meet the tight control targets set by T2T, particularly if they were pregnant, had had methotrexate pneumonitis or bronchiectasis in the past. He felt that it was important not to cause harm to patients by striving too hard to reach targets. Another rheumatologist said that such consideration should be taken into account when negotiating treatment with patients. Andrew Harrison said that risks of treatment in relation to comorbidities needed to be discussed with the patients on an individual basis and that if aiming for remission was impractical or associated with excessive risk, the aim should be to achieve low disease activity where possible. Some patient feedback was gained during this discussion. Patients felt they needed to be able to calculate the level of risk and that the perception of risk and the worry this engendered often varied depending on the day and how they were feeling.

It was pointed out that doctors often poorly explained the risk and benefit of certain treatments and this had been reiterated in a number of studies. Drug risks should be put in terms of relative risk and the patient's own risk-taking behaviour should be taken into account. For instance, many individuals were happy to accept the risk from skiing or drinking heavily.

One rheumatologist raised the fact that the standard disease-modifying therapy, methotrexate, has a number of associated risks, which should not be forgotten.

It was also pointed out that each patient was an individual and that his or her own personalities and attitude to risk was very important. Explanation should be tailored to the patient, as some patients do not always want to receive all the details of possible adverse effects or consequences.

One of the rheumatologists relayed his experience with using composite outcome measures. Initially when the DAS28 was first developed he used it from the outset as a guide to treatment. However, whilst rigorously aiming for disease remission he induced side effects, which caused a patient to lose his job, and from then on he stopped treating to target.

It was felt that treatment needed to be individualised to the patient and the targets often shifted with time depending on the patient's experiences, age and their journey through the disease. The aim of treating rheumatoid arthritis should not be to achieve remission by any means possible.

Andrew Harrison drew the panel discussion to a close with a brief summary. He felt that T2T should not be dismissed as 'ivory tower stuff' and that there were some important principles in the T2T document which hopefully could form the basis of New Zealand consensus. He felt the panel discussion had been helpful to bring forward some of the concerns of the group.

Case presentations

Dr Doug White presented four cases which illustrated some of the recommendations of T2T, and opened these for group discussion.

Case 1: A 45-year-old secretary who smoked and had polyarthritis and Hashimoto's thyroiditis. Her symptoms had begun two months earlier. Her DAS score was 4.8, her HAQ was 0.375, her CRP was 30, and she was anti-CCP and rheumatoid factor positive. She was commenced on methotrexate 10 mg a week.

The question posed related to Recommendation 1 from T2T, i.e. the achievement of a state of clinical remission.

Over a period of time the patient continued to have active disease, with a DAS score of 4.88 after six weeks of treatment at a dose of methotrexate 10 mg weekly.

According to T2T, the methotrexate dose should be increased up to 20 mg weekly and prednisone should be added until the desired treatment target is reached (Recommendation 4). The TICORA study shows that intensive monitoring and treatment with routine disease-modifying drugs improves patient outcomes. Regular monitoring is required according to the T2T regimen.

Case 2: A 40-year-old gardener with a six-month history of polyarthritis, raised inflammatory markers and significant morning stiffness, but no erosions.

Which scores could be used to evaluate his disease activity?

T2T Recommendation 6 is to use composite measures, the DAS, DAS28, SDAI or CDAI.

His initial DAS28 was 6.79, and he was started on methotrexate.

Which parameters would be considered when making treatment decisions?

Recommendation 7 of T2T is that structural changes and functional impairment should be considered when making clinical decisions. Assessing radiographic evidence for erosions is important at this stage. Radiological progression is most marked when DAS scores are higher.

Case 3: A 65-year-old art teacher with rheumatoid arthritis for nine years. She has pain in multiple joints, had breast cancer two years ago, but was in remission after chemotherapy and radiotherapy. She was being treated with triple therapy and hydroxychloroquine, sulphasalazine and methotrexate. She had a number of active joints. Her CRP was 8, her DAS score 4.5, radiographs showed erosions but no recent progression.

Referring to Recommendation 3 of T2T, whilst remission should be a clear target, low disease activity may be an acceptable alternative in longstanding or established disease. This patient needs to be appropriately informed about treatment targets and strategies. Structural changes and functional impairment should be considered when making clinical decisions.

Case 4: A 72-year-old woman has a 15-year history of rheumatoid arthritis, and is currently taking methotrexate 20 mg weekly. Her DAS score was 3.17 and there are no new erosions on her x-rays. Considering she is not in remission what should be your therapeutic target?

T2T to Recommendation 3 – whilst remission should be the main target, low disease activity is acceptable.

This patient continued to demonstrate low disease activity, but her liver function tests became significantly abnormal. After a medication holiday the patient was treated with sulphasalazine.

The patient wished to discontinue all her pills, what should you do?

Evidence was presented by ten Wolde from 1996[10] that discontinuing treatment led to worsening control of disease and worse outcomes, so the advisability of continuing DMARD treatment should be discussed carefully with the patient.

Targets for treatment and how to identify them – Dr Simon Stebbings

Measures of Disease Activity & their Role in Rheumatoid Arthritis

Previous speakers had outlined the T2T philosophy based on evidence that tight disease control can limit erosive progression and disability, with trials such as TICORA[3] and CAMERA[4] demonstrating the effectiveness of this approach. However, before you can have targets you have to have measures. Simon Stebbings went over why measures of outcome should be used in routine practice, which outcome measures could be used and the definitions for remission.

The purpose of T2T is to ensure tight control achieving remission or low disease activity to prevent joint damage and disability. Composite outcome measures have been recommended by the T2T committee in order to objectively document patient progress, but which measures should be used?

According to Pincus and Tugwell (2007)[11] most routine care of patients with rheumatoid arthritis is conducted by Gestalt global impressions without supporting quantitative data. Composite measures, however, provide a more rigorous and objective view of disease activity.

Simon Stebbings reviewed the OMERACT filter, which scrutinises outcome measures in relation to three key areas – truth, discrimination and feasibility.[12] When applied to rheumatoid arthritis, OMERACT identified several core domains, which should be assessed. These are: tender joint count; swollen joint count; patient's assessment of pain and fatigue; patient's global assessment of disease activity; physician's global assessment of disease activity; patient assessment of function (notably the HAQ); the Arthritis Impact Measurement Scales (AIMS); erythrocyte sedimentation rate (ESR) or CRP; radiographic change using variations of the Sharp score.

In clinical practice it is impractical to measure all these indices, but Uhlig (2009)[13] advises that 'worries of the moment should not let the goal of long-term disease control slip from the agenda'.

The most widely used disease activity measure is the DAS28 score, derived from the original 44 joint count. Advantages of the DAS28 are that it reflects the extent of inflammation, provides clinically meaningful targets for treatment (including identifying low disease activity), and has been used as a benchmark across several clinical trials. Disadvantages are that it requires a calculator (because it has a complex formula) and studies suggest that remission status is not necessarily accurately determined by the DAS28. Remission in the DAS28 is characterised as a score of <2.6/10, low disease activity between 2.6 and 3.19. However, these levels still allow for joint counts of five or more to still be classified as remission. In this respect the original definition of remission, from Pinals (1981)[14] criteria for complete remission in rheumatoid arthritis, are worth remembering since this perhaps corresponds better with the concept of remission best understood by rheumatologists and patients.

Dr Stebbings went on to discuss measures of disease activity beyond the DAS28, including simpler alternatives that can be used in daily practice. Smolen et al have promoted the use of the SDAI and the CDAI.[1] These two measures use the same 28 swollen and tender joint count that is used in the DAS. They also use patient global assessment and assessor's global assessment. The SDAI also incorporates the CRP. Calculation of these scores is much simpler since the scores are additive. Studies have shown good correlations between SDAI, CDAI and DAS28. The CDAI may be a better reflection of true remission. Advantages of the SDAI are that it correlates with changes in medical management, due to the higher weighting of the swollen joint count, but the SDAI unlike the DAS28 is not a normally distributed variable, hence disease activity is rated as less severe compared with the DAS28 at low levels of disease activity.

Pincus and Segurado[15] did a survey of rheumatologists and found that a formal tender and swollen joint count was performed in less than half of all visits by most rheumatologists. As the DAS28, CDAI and SDAI are all largely assessor driven, they developed the Routine Assessment of Patient Index Data 4 (RAPID4) score which consists of a patient-completed questionnaire on disability and a self-assessed joint count. This last measure is a patient-completed joint count called the Rheumatoid Arthritis Disease Activity Index (RADAI). The RAPID4 correlates with SDAI and CDAI and also has absolute values for remission and low disease activity.

Finally, Dr Stebbings reviewed the HAQ. He noted that this can be improved considerably in early disease, but is less sensitive in later disease where much disability is irreversible. There are many confusing variations of the HAQ. These are not interchangeable. It should be noted that whilst the standard Stanford HAQ disability index (HAQ-DI) is a normally distributed variable, this is not true of modifications such as the shortened modified HAQ (MHAQ) and the shortened rheumatoid arthritis HAQ (RAHAQ). Most researchers favour the HAQ-DI for this reason.

In conclusion, a number of composite, validated scoring systems exist for measuring disease activity in rheumatoid arthritis. They all have values for remission and high disease activity and can therefore be used to guide treatment decisions. The choice of measure depends largely on the familiarity of the measure and its usability as assessed by individual clinicians.

Joint Count Workshop – Dr Mike Corkill

The T2T day concluded with a joint count workshop. This is possibly the first nationally organised attempt to standardise joint count measurement and was very enlightening. Health professionals and doctors assessed several patients, initially independently and then in groups, and the results of this will be published at a later date.

CONCLUSION

The T2T day was an important national initiative undertaken with the support of the NZRA. The purpose was to gauge the attitudes of New Zealand rheumatologists to this international undertaking. In broad terms New Zealand rheumatologists were fully supportive of the T2T initiative and robust discussion was entered into with regard to choice of composite measures. The joint calibration workshop may well help to standardise assessments of joint counts amongst rheumatologists in New Zealand. Further meetings of the T2T committee and the wider New Zealand Rheumatology Community are planned to follow up on this exciting initiative.

References

1. Smolen JS et al. Treating rheumatoid arthritis to target: recommendations of an international task force. Ann Rheum Dis. 2010;69(4):631-7.
2. Schoels M et al. Evidence for treating rheumatoid arthritis to target: results of a systematic literature search. Ann Rheum Dis. 2010;69(4):638-43.
3. Grigor C et al. Effect of a treatment strategy of Tight Control for Rheumatoid Arthritis (the TICORA study): a single-blind randomised controlled trial. Lancet 2004;364(9430):263-9.
4. Verstappen SM et al. Intensive treatment with methotrexate in early rheumatoid arthritis: aiming for remission. Computer Assisted Management in Early Rheumatoid Arthritis (CAMERA, an open-label strategy trial). Ann Rheum Dis. 2007;66(11):1443-9.
5. van Tuyl LH et al. Tight control and intensified COBRA combination treatment in early rheumatoid arthritis: 90% remission in a pilot trial. Ann Rheum Dis. 2008;67(11):1574-7.
6. Fransen J et al. Effectiveness of systematic monitoring of rheumatoid arthritis disease activity in daily practice: a multicentre, cluster randomised controlled trial. Ann Rheum Dis. 2005;64(9):1294-8.
7. Symmons D et al. The British Rheumatoid Outcome Study Group (BROSG) randomised controlled trial to compare the effectiveness and cost-effectiveness of aggressive versus symptomatic therapy in established rheumatoid arthritis. Health Technol Assess 2005;9(34):1-78.
8. Stenger AA et al. Early effective suppression of inflammation in rheumatoid arthritis reduces radiographic progression. B J Rheumatol. 1998;37(11):1157-63.
9. Taylor WJ et al. Disease activity score 28-ESR bears a similar relationship to treatment decisions across different rheumatologists, but misclassification is too frequent to replace physician judgement. Rheumatology 2008;47(4):514-8.
10. ten Wolde S et al. Randomised placebo-controlled study of stopping second-line drugs in rheumatoid arthritis. Lancet 1996;347(8998): 347-52.
11. Pincus T and Tugwell P. Shouldn't standard rheumatology clinical care be evidence-based rather than eminence-based, eloquence-based, or elegance-based? J Rheumatol. 2007;34(1):1-4.
12. Boers M et al. The OMERACT filter for Outcome Measures in Rheumatology. J Rheumatol. 1998;25(2):198-9.
13. Uhlig T. "KISS" – embracing routine patient assessment. J Rheumatol. 2009;36(6):1096-8.
14. Pinals RS et al. Preliminary criteria for clinical remission in rheumatoid arthritis. Arthritis Rheum. 1981;24(10):1308-15.
15. Pincus T and Segurado OG. Most visits of most patients with rheumatoid arthritis to most rheumatologists do not include a formal quantitative joint count. Ann Rheum Dis. 2006;65(6):820-2.

Abbott
A Promise for Life

Publication of this Expert Forum was supported by an unrestricted educational grant from Abbott Laboratories NZ Ltd. The content and opinions expressed in this publication do not necessarily reflect the views of Abbott unless so specified.