PCL PerioCourses Ltd NEWS

OCTOBER 2011

Welcome to the latest edition of the PCL News and apologies for its late arrival. Ian, Sarovi and I have been ridiculously busy in our practices and on the lecture circuit which has been huge fun and very stimulating but it has meant that it has been difficult to get the newsletter out. Here it is though and with lots of interesting information, well we think so at least! Next year is a big year for all of us, and not just because it's Olympic year! I've got presentations at the BSP Spring Meeting in Cardiff (3rd March), the BDA conference in Manchester (28th April) and at EuroPerio7 in Vienna (8th June). Ian is building up his practice and still doing all the perio at Liverpool Dental School and Sarovi will, by the time you read this, have just got married with very exciting plans for the future - watch this space! We couldn't do any of this without the unfailing support of Mrs O, to whom we are all eternally grateful, me especially of course! You can follow PerioCourses on Facebook and we plan to get on Twitter and get our video material on YouTube. As ever, keep sending us your feedback and questions and we look forward to seeing lots of you again as we whizz round the country.

Phil Ower

Systemic Antibiotics

Those of you who have been on our courses will know our philosophy and that of the 6th European Workshop's consensus on the use of systemic antibiotics in perio. Whilst we don't use lots of systemic antibiotics in the management of our chronic periodontitis cases, when indicated it is good to know what to use and why we use it. Whilst the literature is littered with different antibiotic protocols we commonly use the amoxycillin/ metronidazole (Von Winklehoff cocktail) combination as our default drugs of choice. People have often asked us if we have to give the combination of drugs due to the possible side effects and couldn't we just give one or the other. Well, this study looks at just that question.

In this study they randomly assigned a group of generalized chronic periodontitis patients to three groups SRP alone, SRP +Metronidazole and SRP+Met +Amox. When clinical and microbiological parameters were checked at 3 months post treatment the SRP+Met+Amox group showed improvements over the SRP group. Interestingly, The difference between the SRP group and the SRP+Met group were negligible. Whilst this is a short study with no long-term follow ups, this supports the use of the combination of drugs and shows the limitations of metronidazole on its own as an adjunct to SRP.

Clinical and microbiological benefits of metronidazole alone or with amoxycillin in the treatment of chronic periodontitis" a randomized placebo-controlled clinical trail
Silva et al, J Clin Periodontol 2011; 38: 828-837

Ian Dunn

Complaints and Compliance

This was an interesting study that showed what we might expect. The study looked at 1196 patients and the relationship between their chief complaints (CC) and compliance with periodontal therapy. It also examined the difference in compliance between patients who contributed towards their treatment costs (co-payment) compared to those for whom it was provided free of charge.

The subjects with acute symptomatic CCs were 60% more likely to receive periodontal treatment than chronic symptomatic patients. However, subjects with acute symptomatic CCs were 60% less likely to complete periodontal treatment. Hence, we may draw the conclusion that patients with acute symptomatic CCs have a higher motivation to initiate periodontal therapy, but are less likely to complete basic periodontal therapy.

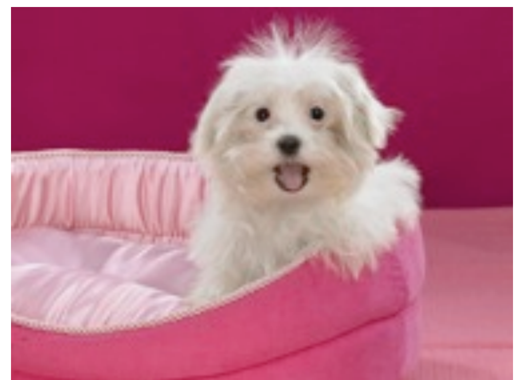
Patients who shared the cost of treatment were slightly more likely to complete periodontal therapy, when compared to those who did not.

Practical Implications: Improving patient perception and dedication to treatment should be achieved by emphasising the chronic nature of periodontal disease through public education, referral of patients to periodontists for advanced management, and incorporation of co payments into the insurance plan.

Association between patients' chief complaints and their compliance with periodontal therapy. *Yeh H-C, Lai H. J Clin Periodontol 2011; 38: 449–456*:

Sarovi Drone

Canine Guidance or Perio Bolognese!



No, not a new variation on a classic Italian dish, but a story of a patient with four legs. Recently I was approached by a vet, specialising in veterinary dentistry, who was struggling with a canine patient (a Bolognese), called Spag, which had significant periodontal disease, a condition which is known to afflict this particular breed. The animal had lost several incisors as a result of extensive bone loss and, at the time I took the call, had generalised gingivitis around the remaining incisors with about 30% horizontal bone loss and some mobility. There was lots of recession, prompting a high level of concern about future tooth loss, but no pockets. Hello, that sounds familiar. But yes, this is a dog we are talking about. The teeth were being brushed daily by the owners - with toothbrush and Corsodyl. The vet had tried scaling and polishing under GA and metronidazole but, sadly, not at the same time and was considering more extractions.

I tried to analyse this patient's periodontal problem; was this an issue for the patient or was it one for his human guardians? Had anyone asked the patient if he was concerned about his periodontal problems? Had anyone asked the patient if he wanted his teeth out? Had all options been considered? Were his missing teeth proving a problem in attracting a mate? In the end we decided the dog was probably quite happy, even if his owners weren't, and maybe a 'wait and see' approach would be best. I had a cat once with only 2 teeth and he was quite happy, until he got run over, but I don't remember him having any problems with his dinner.

Phil Ower

Timing of the delivery of systemic antibiotics when treating generalized aggressive periodontitis- initial therapy or re-treatment phase? Does it matter?

Background

In an earlier study Prof Griffiths group had showed that the adjunctive use of systemic Metronidazole and Amoxycillin significantly improved the outcomes of non-surgical debridement in generalized aggressive periodontitis. In the interests of fairness the group went back to the group who had received a placebo in the first phase of the study and retreated sites ≥5mm non-surgically in conjunction with systemic Metronidazole and Amoxycillin. To ensure that they did not end up in our “Bad Science” talks in module 4, they also retreated the test group from the first phase of the study with non-surgical treatment.

In simple terms, both groups had had the same amount of treatment and antibiotics, some had them in the first phase and others in the second phase of treatment.

Findings

Patients who had received antibiotics at the initial therapy stage of their treatment showed statistically significant improvements in terms of pocket depth reduction, and the % sites improving above the clinically relevant thresholds compared to the group who had the antibiotics at the re-treatment phase.

Comment

The study was relatively short in terms of follow-up but the data suggests that aggressive disease responds better to aggressive treatment i.e. systemic antibiotic therapy at the initial phase of non-surgical treatment. We would not be PerioCourses if we did not stress that the use of systemic antibiotics should only ever be used in compliant patients with great oral hygiene and ***only as an adjunct to mechanical debridement***.

Ref: Amoxycillin and metronidazole as an adjunctive treatment in generalized aggressive periodontitis at initial therapy or re-treatment:a randomized controlled clinical trial. Griffiths et al, J Clin Periodontol 2011 38:43-49

Phil Ower

Subgingival Air Polishing

We often get asked about the therapeutic value of air polishing which has been around for a while as a means of removing supragingival staining but until recently there has not been much data on it’s use as a subgingival therapy for periodontitis. The original air-polisher (*Air-Flow - EMS*) used sodium bicarbonate powder and had been shown to be quite abrasive, especially to dentine, which is what you’d expect from an effective stain remover. Recently however EMS have produced a differently designed tip (*Perio-Flow*) with a non-abrasive fine glycine powder and reduced pressure, so it’s suitable for subgingival debridement of the biofilm. So far the only studies, this one included, have evaluated it’s use in SPT patients and it’s found to be as effective, in clinical and microbiological terms, as traditional maintenance methods. We haven’t found any studies examining its use for initial therapy, presumably because it won’t remove calculus, only disrupt the biofilm, but why not? We’re very into minimally invasive techniques so we wait for those studies, especially as this study, and others, invariably show that air-polishing is much preferred by patients when compared to traditional debridement.

Subgingival debridement of periodontal pockets by air polishing in comparison with ultrasonic instrumentation during maintenance therapy *Wennstrom et al , J Clin Periodontol 2011; 38: 820-827*

Phil Ower

Periodontal health in children exposed to passive smoking. *Erdemir et al, J Clin Periodontol 2010; 37: 160-164*

We're often asked about the effect on the periodontal tissues of passive smoking (PS). While there is evidence of the effects of PS on other health issues in children, no study has examined PS and periodontal health. Although the study relied on parents' self-reporting of smoking habits (probably under-estimated) children exposed to PS were found to have elevated serum cotinine and greater attachment loss (but only 0.1mm difference, $p<0.05$ - only just significant). Mmmmm.....

Visceral fat area-defined obesity and periodontitis among Koreans. *Han et al, J Clin Periodontol 2010; 37: 172-179*

Obesity, diabetes and periodontitis are closely associated but no-one is sure why. This study used a different measure of obesity - visceral fat area (VFA) instead of BMI, which is usually used as a measure of obesity, and found an association with periodontitis. We still can't explain the association but there may be confounding factors - refined carbohydrates perhaps?

Ten-year results after connective tissue grafts and guided tissue regeneration for root coverage. *Nickles et al, J Periodontol 2010; 81: 827-836*

Not many studies have followed up root coverage procedures over such a time scale. This study compared the treatment outcomes over 10 years of root coverage with CTG vs GTR. In common with other studies CTG was found to be much more successful. However over 10 years root coverage reduced from 72% (after 6 months) to 43% in the CTG group and from 43.7% to 1.9% in the GTR group.

HIV infection and bone loss due to periodontal disease. *Aichelmann-Reidy et al, J Periodontol 2010; 81: 877-884*

355 subjects who were HIV positive were assessed by examination and questionnaire. The results suggested that HIV infection is not related to alveolar bone loss but that the bone loss seen in such individuals is due to other factors such as smoking.

Subgingival plaque removal using a new air-polishing device. *Moene et al, J Periodontol 2010; 81: 79-88*

This study looked at the microbiological benefits of using a new air-polishing device. The device uses an abrasive powder introduced into a stream of compressed air to clean the root surface. There were no adverse events noted with the 50 patients and generally patients preferred this technique to *scaling and root planing*. There were no benefits compared to SRP however.

Association between self-efficacy and loss to follow-up in long-term periodontal treatment. *Kakudate et al, J Clin Periodontol 2010; 37: 427-435*

The authors of this study used a validated self-efficacy test to see if the results of this correlated with the follow-up reliability of the patients - 144 were followed over a 3 year period. The results indicated that the the more self-effective the patients the more likely they were to attend for follow-up visits. We all know this of course but it's nice to have it confirmed!

Phil Ower

Go watch Bonnie!

Please find time to check out this video on YouTube:

The URL is http://www.youtube.com/watch?v=TVfmUfr8VPA

Bonnie Bassler is a Professor of Microbiology at Princeton and this 20 minute lecture was give at a TED meeting which, if you're not familiar with the organisation, promotes free and radical thinking across the fields of technology, entertainment and design. The lecture is brilliant and perfectly compliments what we teach about biofilms on the courses. Enjoy!

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