Hong Kong J. Dermatol. Venereol. (2021) **29**, 89-91

Journal Watch

Reviewed by NM Lau 劉顏銘, W Ngan 顏威廉, MF Yeung 楊明晃

Resistance-guided treatment of *Mycoplasma genitalium* infection at a UK sexual health centre

Conway RJH, Cook S, Malone C, Bone S, Hassan-Ibrahim MO, Soni S.
Int J STD AIDS 2021;32:758-65.

This study assessed the efficacy of macrolide resistance-guided treatment (RGT) of non-gonococcal urethritis (NGU) and pelvic inflammatory disease (PID) due to Mycoplasma genitalium (MG) infection. The ResistancePlus® MG assay was used to detect macrolide resistance-mediating mutations (MRMMs) in confirmed cases of MG. Cases in which MRMMs were detected, were given moxifloxacin 400 mg daily for 10 days, while those without MRMM were treated with 2 g azithromycin (1 g single dose and then 500 mg daily for two days).

There were a total of 57 MG positive cases (32 men and 25 women). Of these, MRMMs were detected in 41 cases (72% [95% confidence interval (95% CI) 58-83%). The use of RGT resulted in a significantly lower treatment failure rate of 1/32 (3%) vs 10/37 (27%) without RGT. There was a lower treatment failure rate in male NGU (0/15 vs. 7/21 p=0.027) but this reduction was not seen in female PID. The time to negative test of cure (TOC) in male NGU (RGT: 55.1 [95% 43.7-66.4] vs. without RGT: 85.1 [95% CI 64.1-106.0] days, p=0.077). This difference was not seen in female PID.

It was concluded that macrolide resistance of 72% of this study is unexpectedly high, and is also higher than earlier UK reports. Treatment failure of MG urethritis is lower with RGT, as cases that are susceptible to azithromycin can be correctly identified while reserving moxifloxacin for those with macrolide resistance.

Does online sexually transmitted infection screening compromise care? A service evaluation comparing the management of chlamydial infection diagnosed online and in clinic

Gasmelsid N, Moran BCB, Nadarzynski T, Patel R, Foley E.
Int J STD AIDS 2021;32:528-32.

Online sexual health screening has been introduced in some areas to accommodate for heavy patient load. However, there are certain requirements such as Internet access and for the patient to be able to self-sample correctly which may limit its access to certain patient groups. Therefore, the accessibility of online STI screening was evaluated in this study in Hampshire, UK, over a period of six months by comparing the number of asymptomatic chlamydia infections both before and after the establishment of the online STI screening service. It was found that there was no difference between the number of asymptomatic chlamydial infections between the two periods and that this did not vary with age, level of poverty or gender. For both periods, the most of the diagnosed cases were under 25 years of age, women, heterosexual and of white ethnicity.

It was therefore concluded that the use of online STI screening services avoids further strain on clinic services and is an accessible and feasible option even for high-risk groups.

Clinical features, prognostic factors, and treatment interventions for ulceration in patients with infantile hemangioma

Fernández Faith E, Shah S, Witman PM, Harfmann K, Bradley F, Blei F.
JAMA Dermatol 2021;157:566-72.

Ulceration is a common complication of infantile hemangioma (IH) and can result in significant morbidity. This study investigated the treatment options for ulceration in IH as well clinical prognostic indicators of healing.

A retrospective, multicentre cohort study of 436 patients (327 [75%] girls; 109 [25%] boys) with a clinical diagnosis of ulcerated IH was performed between 2012 and 2016 (median age at ulceration: 13.7 weeks; IQR, 8.86-21.30 weeks). Sixty-four (17.6%) cases were receiving treatment for infantile haemangioma prior to ulceration (topical timolol (42 [65.6%]); systemic β-blockers (24 [37.5%]). Ulceration occurred at a median time of six weeks (IQR 3-15 weeks) after initiation of treatment. The median time to healing was as follows: wound care alone: 4.79 weeks (95%CI, 3.71-5.86 weeks); timolol: 5.14 weeks (95%CI, 4.57-6.00 weeks); systemic β-blocker: 6.36 weeks (95%CI, 5.57-8.00 weeks); multimodal therapy: 7.71 weeks (95%CI, 6.71-10.14 weeks).

Among patients treated with propranolol, treatment at lower doses (≤1 mg/kg/d), but not higher doses was associated with a significantly faster healing time. Ulceration area of greater than 1 cm^2 was associated with a higher complication rate (OR: 4.22; 95%CI: 2.37-7.69; P<0.001) and larger IH was associated with longer healing times.

It was concluded that longer healing times were associated with larger IH size and that although β-blockers were effective in IH, healing times were still prolonged in many cases. Low-dose propranolol (≤1 mg/kg/d) should be considered as an initial treatment for cases of ulcerated IH requiring systemic therapy.

Association between topical calcineurin inhibitor use and risk of cancer, including lymphoma, keratinocyte carcinoma, and melanoma: A systematic review and meta-analysis

Lam M, Zhu JW, Tadrous M, Drucker AM.
JAMA Dermatol 2021;157:549-58.

A black box warning was issued by the US Food and Drug Administration against topical calcineurin inhibitors (TCIs) in 2006. This systematic review and meta-analysis was therefore performed to evaluate the association between TCI use and risk of malignant neoplasms.

A MEDLINE search of the Ovid, Embase via Ovid, and Web of Science databases from inception to August 21, 2020 was performed. This included observational studies of the association between malignancy and treatment with TCIs (namely, tacrolimus and pimecrolimus). Of the 2464 nonduplicate records identified, eight unique cohort studies and three case-control studies were selected and analysed.

There was a total of 408, 366 cases that were treated with TCI (males 44.9%; females 55.1%; mean age 17.1 years). No association between TCI use and malignancy compared with nonactive comparators (RR: 1.03; 95% CI: 0.92-1.16) was found. There was an increased risk of lymphoma with TCI with both non-active (RR: 1.86; 95% CI: 1.39-2.49) and topical corticosteroid comparators (RR: 1.35; 95% CI: 1.13-1.61). There was also no significant association between TCI use and increased skin cancer (melanoma and keratinocyte carcinoma).

It was concluded that although the findings suggested an association between TCI use and lymphoma, the absolute risk of lymphoma was very small. The findings did not suggest any association with other malignancies.

Risk of liver disease in patients with psoriasis, psoriatic arthritis, and rheumatoid arthritis receiving methotrexate: A population-based study

Gelfand JM, Wan J, Zhang H, Shin DB, Ogdie A, Syed MN.
J Am Acad Dermatol 2021;84:1636-43.

Methotrexate has long been used as first-line therapy for psoriasis (PsO), rheumatoid arthritis (RA) and psoriatic arthritis (PsA). However, there is a risk of hepatotoxicity. This study directly compared the risk of liver disease in PsO, RA and PsA patients treated with methotrexate.

There were a total of 5,687, 6,520, and 28,030 PsO, PsA, and RA patients who were treated with methotrexate respectively. The incidence of liver disease was highest in PsO, followed by PsA, and least for RA. Mild liver disease was the most common occurrence with an incidence rate as follows: PsO: 4.22 per 1000 person-years (95% confidence interval [CI] 3.61-4.91); PsA: 2.39 (95% CI 1.95-2.91); RA: 1.39 (95% CI 1.25-1.55). For the least common but most serious outcome of cirrhosis-related hospitalisation was the least common outcome with an incidence rate per 1000 person-years as follows: PsO: 0.73 (95% CI 0.49-1.05); PsA 0.32 (95% CI 0.18-0.54); RA: 0.22 (95% CI 0.17-0.29).

Compared to RA patients, there was a significantly increased risk of mild liver disease in PsO cases (hazard ratio [HR] 2.22, 95% CI 1.81-2.72), moderate-to-severe liver disease (HR 1.56, 95% CI 1.05-2.31), cirrhosis (HR 3.38, 95% CI 2.44-4.68), and hospitalisation due to cirrhosis (HR 2.25, 95% CI 1.37-3.69). There was also a PsA patients had a significantly greater risk of liver involvement when compared to RA patients: PsA:mild liver disease (HR 1.27, 95% CI 1.01-1.60) and cirrhosis (HR 1.63, 95% CI 1.10-2.42).

This study showed PsO patients treated with methotrexate are at higher risk of liver complications than PsA or RA patients and therefore require closer monitoring. More research into the underlying factors for these differences is needed.

Dupilumab therapy for alopecia areata in paediatric patients with concomitant atopic dermatitis

McKenzie PL, Castelo-Soccio L.
J Am Acad Dermatol 2021;84:1691-4.

Dupilumab is a systemic interleukin-4 receptor blocker that is approved for atopic dermatitis (AD) in children aged over 6 years of age. There have been mixed results, with both improvement and deterioration reported from the literature on the efficacy of dupilumab in alopecia. The efficacy of dupilumab in 16 paediatric patients (alopecia universalis: 7 cases, ophiasis AA: five cases, patchy AA: four cases) with alopecia areata (AA) was reported. Most cases had resistant long-standing disease (median 4 years from diagnosis), being refractory to multiple therapies (median four therapies) and all cases had AD.

Dupilumab 300 mg subcutaneous injection was administered every two weeks. Initial deterioration was seen in four patients worsened on dupilumab initially as evidenced by an average deterioration of Severity of Alopecia Tool (SALT) score of 11.3 at one to two months after start of therapy. However, these improved later on. Four cases with initial active AA in the subset analysis showed improvement at four months while there was minimal or no response in two patients. In cases that showed a response, the mean reduction in SALT score was 33.3 at 12 months follow-up.

It was concluded that despite the small sample size, dupilumab result in an increased chance of regrowth in cases of AA and concomitant chronic, severe AD and that this may be considered in cases that are resistant to other therapies. Further research in this area is needed.