Successful Treatment to Dermatitis Papillaris Capilliti (Kaposi) with Kampo (Japanese Traditional Herbal Medicine) Formulations

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Abstract: We report a case of dermatitis papillaris capilliti (DPC) that was successfully treated with Kampo (Japanese traditional herbal medicine) formulations (Keigai-rengyo-to and Keishi-bukuryo-gan). A 38-year-old man presented with longstanding-therapy resistant papillomatous lesions on the occipital area and nape for 15 years. Diagnosis was made as DPC. He had also cystic acne. Histopathological findings revealed follicular hyperkeratosis in the infundibulum and fibrosis in the dermis. After Kampo formulations (Keigai-rengyo-to and Keishi-bukuryo-gan) were administered, inflamed and granulomatous lesions subsided remarkably. The successful treatment with these herbal formulations shows Kampo therapy can acts as an alternative treatment for DPC.

Keywords: Dermatitis papillaris capilliti, Kampo, Keigai-rengyo-to, Keishi-bukuryo-gan.

INTRODUCTION

Dermatitis papillaris capilliti (DPC) belongs to one of the follicular occlusion diseases. It is also known as acne keloidalis and folliculitis nuchae [1]. The etiology of DPC is unclear. It is a refractory therapy resistant disease. DPC occurs preferentially in middle age. Treatment for DPC is extremely difficult. It has been treated with oral and topical antimicrobials, tranilast, intralesional steroid injection, and surgical therapy [1]. These treatments are not always satisfactory for patients. We report a case of DPC treated successfully with Kampo formulations (Keigai-rengyo-to and Keishi-bukuryo-gan).

CASE REPORT

A 38-year-old man presented with recurrent therapy-resistant purulent lesions on the nape and occipital area for 15 years. His case history showed papillary exudative hemorrhagic nodules and cysts on the occipital area and nape for those 15 years. The lesions manifested red deep-seated follicular aggregated nodules, granulomatous nodules, erosion, hypertrophic scar and keloids, and tufted hairs with clear exudate discharge and hemorrhage (Figure **1**). He also had cystic nodules on the face (acne cystica). He had been treated for 15 years with antimicrobials such as oral minocyclines, cephalosporins and topical antimicrobials (clindamycin and nadifloxacin). The lesions did not respond to these therapies. A skin biopsy was performed. H&E staining showed obstruction of follicle with remarkable hyperkeratosis in the follicular infundibulum, and perifollicular cell infiltration in the upper dermis (Figure **2a**). Higher magnification showed hyperkeratosis with keratohyaline granules and dense neutrophils, lymphocytes and plasma cells and fbrosis around the follicle in the dermis (Figure **2b**). Bacterial culture from the lesions found *Staphylococcus epidermidis*. Laboratory findings showed elevated WBC (13660/μl), ALT (77 U/dl), ZTT (31.8 IU/dl), CRP(0.81 mg/dl), and IgM(226 mg/dl). Serum cortisol, testosterone, and free testosterone were within normal limits.

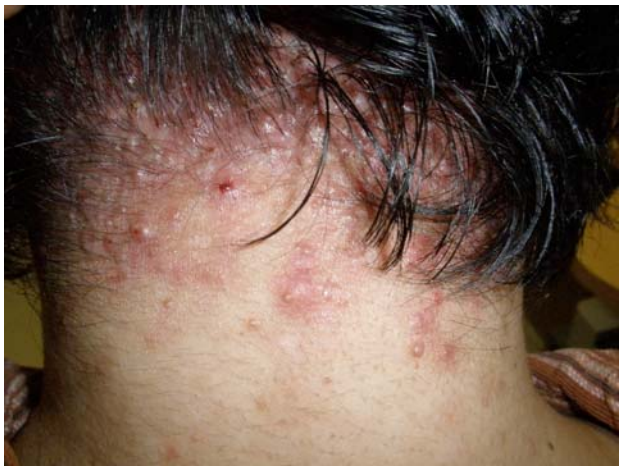

Figure 1: Red deep-seated follicular aggregated nodules, granulomatous nodules, erosion, hypertrophic scar, keloids, and tufted hairs with clear exudate discharge and hemorrhage on the occipital area.

Based on clinical and histopathological findings, we diagnosed as DPC. The patient was treated with oral and topical antimicrobials. However, the lesions did not

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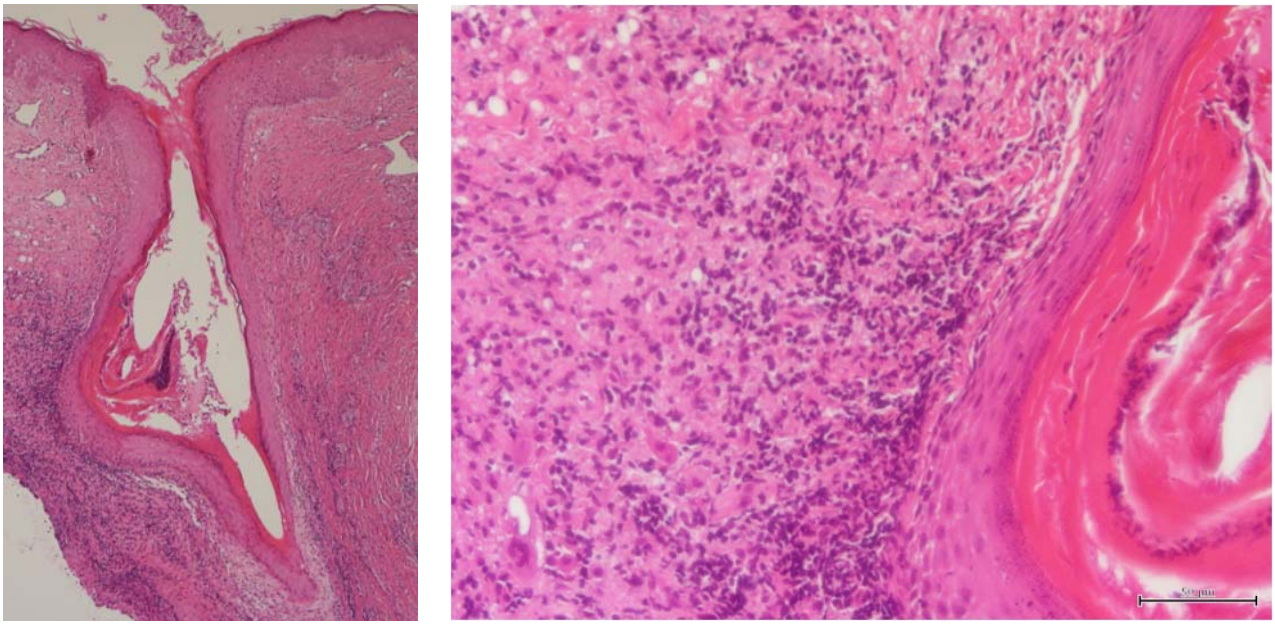

a **b**

Figure 2: a: Histopathological findings showed obstruction of follicle with remarkable hyperkeratosis in the follicular infundibulum, and perifollicular cell infiltration in the upper dermis (Figure **2a**).
b: Higher magnification showed hyperkeratosis with keratohyaline granules and dense neutrophils, lymphocytes and plasma cells and fbrosis around the follicle in the dermis (Figure **2b**).

respond to these treatments. Then, we decided to administer Kampo treatment (Japanese traditional herbal therapy: Keigai-rengyo-to and Keishi-bukuryo-gan).

After two weeks, the inflamed and granulomatous lesions had subsided remarkably (Figure **3**). The therapy lasted for 6 months and his skin lesions almost healed up.

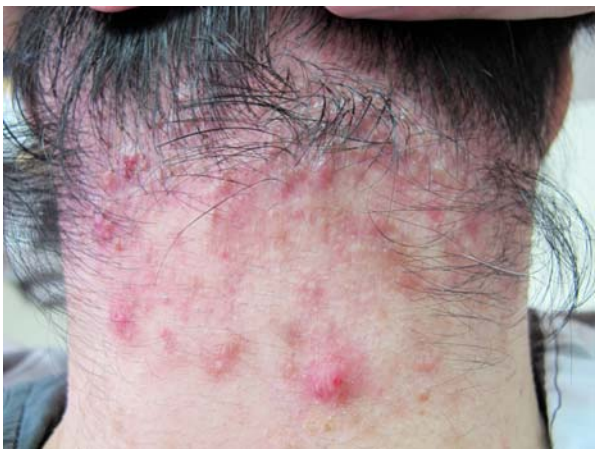

Figure 3: The inflamed and granulomatous lesions had subsided remarkably.

DISCUSSION

DPC represents deep chronic folliculitis, and occurs in men rather than women. The preferential area is nape and occipital area. DPC occurs more in men having a fat neck. The etiology of DPC is unclear. The anatomical site, bacterial infection, and autoimmune response may be involved. Abnormal keratin expression has been reported recently [2]. Clinically, aggregated recurrent pustules are prominent. Histopathology shows that the infundibulum and isthmus in hair follicle are destroyed [3]. The hairs are spilled out in the dermis. However, the sebaceous gland is absent [3]. DPC is categorized as one of follicular occlusion diseases.

It is also refereed to acne keloidalis. DPC is very resistant to therapy. In our case, oral and topical antimicrobials therapy was administered. However, these therapies were not effective. Then we decided to administer Japanese herbal treatment.

Because there has been reported successful treatment for chronic pyoderma of the scalp with Kampo formulations (Keigai-rengyo-to and Keishi-bukuryo-gan) [4]. The status of DPC are considered to be stagnation of the local circulation, hemorrhage and chronic inflammation. The skin color is dark with exudative bleeding. Keishi-Bukuryo-gan improves peripheral circulation, and the elimination of pathogens and waste products [5]. Keigai-rengyo-to (KG) exerts anti-inflammatory and anti-toxic effects. It is effective for acne vulgaris due to its anti-bacterial effects [6].

In KG, one of medial plant, *Phellodeni Cortex*, has very strong antimicrobical activity against *Propionibacterium acnes* [6] with berberine [7]. KG is also effective for granulomatous diseases such as sarcoidosis [7]. It can suppress active oxygen due to decreased neutrophil-generated O2-, H2O2 and OH, resulting in anti-inflammatory effect on acne lesions [8]. The pathophysiological mechanism by which these Japanese herbs affect on the pathogenesis of DPC is unclear. Nevertheless, these drugs can function as an alternative adjuvant therapy for DPC.

Further cases with DPC should be studied to elucidate the pathomechanism involved.

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Received on 05-09-2013 Accepted on 31-10-2013 Published on 30-11-2013