A SINGLE CASE STUDY ON AYURVEDIC MANAGEMENT OF GRANULOMA ANNULARE

Samima Azmi¹, S.K. Chakraborty²

¹PG Scholar, Dept. of Roga Nidan, Govt. Ayurvedic College, Guwahati-14, Assam, India
²Professor & HOD, Dept. of Roga Nidan, Govt. Ayurvedic College, Guwahati-14, Assam, India

Email: samimaaazmi@gmail.com

ABSTRACT
Granuloma annulare is a fairly rare chronic skin condition which presents as reddish bumps on the skin arranged in a circle of ring. A 31 years old male has exoriated papule and plaques over bilateral forearm and bilateral dorsum of feet since 8-9 years. History revealed that he is a diagnosed case of granuloma annulare. He had been treated with antibiotics, anti-fungal, corticosteroids and immunosuppressant drugs. Conventional therapy used in this condition was unsatisfactory. With proper Ayurvedic modalities in OPD set up, the patient got significant relief and his quality of life has markedly improved. This case study demonstrates that granuloma annulare can be well managed with Ayurvedic medicines.

Keywords: Exoriated Papules, Plaques, Granuloma Annulare, Ayurvedic Modality

INTRODUCTION
Granuloma annulare is a fairly rare chronic skin condition which presents as reddish bumps on skin arranged in a circle of rings. It can initially occur at any age and is 4 times more common in females. Aside from visible rash, granuloma annulare is usually asymptomatic. Sometimes the rash may burn or itch. People with granuloma annulare usually notice a ring of small firm bumps (papules) over the backs of forearm, hands or feet often centered on joints or knuckles. The bumps are caused by clustering of T-cells below the skin. Occasionally, multiple rings may join into one. Rarely, granuloma annulare may appear as a firm nodule under skin of arms or legs. Outbreaks continue to develop at the edges of aging rings. No conclusive cause has yet been found for granuloma annulare. It may present into different types: - localized, generalized, patch type, cutaneous & perforating granuloma annulare. Conventional treatment includes topical steroid treatment followed by oral steroid and finally intradermal injection at the site of each ring. Most recent research suggests combination of rifampicin, ofloxacine and minocycline hydrochloride once monthly or ROM therapy.

In Ayurveda the condition may somewhat resemble the features of mandala kushta (one of maha kushta) which is characterized by-
- **Swetam, raktam**: white or reddish in colour.
- **Sthiram**: Stable
- **Styanam**: compact
Snigdha: unctuous
Utsana: elevated.
Mandala: circular
Krccha sadhya: difficult to cure
Anyonya samsaktan: matted patches.
Kapha predominant.

Herein, a diagnosed case of granuloma annulare has been effectively intervened with Ayurvedic modalities in OPD set up, which has been described. A significant improvement was observed after a period of 4 months of regular treatment with monthly follow up.

**CASE REPORT:**

**Basic information:**
- Age: 31 years
- Sex: Male
- Occupation: CRPF Service
- Religion: Hindu
- SE Status: Middle class
- Education: 12th pass
- Family history: Nothing significant.

**Chief complaint:** A diagnosed case of granuloma annulare, presented with complaints of excoriated papules and plaques over bilateral forearm and bilateral dorsum of feet since 8-9 years.

**Time line of case:**

<table>
<thead>
<tr>
<th>Year</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>2010</td>
<td>Moderately itchy reddish papular lesion in annular arrangement over dorsal aspect of right hand.</td>
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<tr>
<td>2011</td>
<td>Patient was on anti-fungal treatment for more than one year without relief and the lesions have gradually spread to his forearm bilaterally and over both the legs.</td>
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<td>2013</td>
<td>Visited Apollo Hospitals, Chennai</td>
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<td>Histopathological study revealed typical granuloma annulare</td>
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<td></td>
<td>Interrupted course of dapsone 100mg/ day for 6 months without any significant improvement except partial relief in itching.</td>
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<tr>
<td>2015</td>
<td>Visited GMCH</td>
</tr>
<tr>
<td></td>
<td>Given 13 cis retinoic acid 30mg/ day for 4 months but without remarkable effect.</td>
</tr>
<tr>
<td>2016</td>
<td>Given tab prednisolone 20mg/ day &amp; Tab HCQ 200mg/ day along with anti-fungal for 2 months. No any improvement seen.</td>
</tr>
<tr>
<td>2017</td>
<td>Tb defza 6mg OD with mometasone cream. No improvement observed.</td>
</tr>
<tr>
<td>2018</td>
<td>Patient was only on local emollients when he visited GACH in November 2018.</td>
</tr>
<tr>
<td>2019</td>
<td>Significant improvement observed with Ayurvedic Medicines.</td>
</tr>
</tbody>
</table>

**CLINICAL FUNDING’S**

- G/E: the general condition of the patient was good without any alterations in vital signs. Patient had normal appetite & bowel bladder habit with regular sleep pattern. He had no any known addictions. Patient was not a K/C/O diabetes, hypertension or any such chronic illness. On observation his prakriti was found to be pitta- kaphaj. His agni bala and sharir bala was madhyam. No specific etiological factor was found is history.
- L/E: Multiple circumscribed pink colored papules are seen over both the hands and feet associated with moderate pruritus. The lesions started in distal part of dorsum of right hand than spread towards the dorsal aspect of forearm. On examination, there were numerous discrete skin colored and pink papules of size (0.5 X 1) cm² over hand and legs in groups and in annular arrangement which are bilaterally in symmetrical pattern. Hair, nail and mucosa seems to be normal
  - Swetam raktam- present
  - Sthiram- absent
  - Styamam- present
  - Snigdha- absent
  - Utsana- present
  - Mandala- present
  - Krcchasadhya- present
  - Kandu- present
Lab Inv: Laboratory study showed the following:
Hemoglobin= 12.6g/ dl, leucocytes= 12300/ cu mm, DLC= N57L38 M4E1,
ESR= 20mm/h, platelet count= 1.97lakhs/ microL; RBS=72mg/dL; TSB= 0.8mg/dL; AST=23/L; ALT=21/L
S. creatinine= 0.9mg/ dl, ALKP=152IU/L; Sr. cholesterol= 153 mg/dl; HDL=53mg/dl, LDL= 78mg/ dl, Triglycerides= 115mg/ dl.

Biopsy: HPE revealed several small granulomatous lesion in dermis composed of foci of necrobiotic collagen surrounded by histiocytes in palisading arrangement and intermingled with lymphoid cells and fibroblasts. The degenerated collagen appeared pale & homogenous. Alcian blue stained section showed bundle of incomplete collagen degeneration separated by histiocytes and lymphocytes with mucin deposits. The findings were suggestive of granuloma annulare. Direct immunofluorescence done on frozen sections using antibodies against IgG, IgA, IgM and C3 did not reveal any deposits.

Treatment:
Considering the history, clinical examination and investigations, following treatment protocol was planned.

<table>
<thead>
<tr>
<th>Time Period</th>
<th>External treatment (Local)</th>
<th>Internal treatment (Oral)</th>
</tr>
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<tbody>
<tr>
<td>29/11/18 to 24/01/19 (for 2 months)</td>
<td>Mahamarichyadi taila (Yogaratnakara vatarakta adhikara 702, AFI, Vol II 8.8) + Gudduchi taila (Bhaisajya Ratnavali, Vatarakta Adhikar- 53-60)</td>
<td>1. Arogyavardini vati (Rasendrasara Sangrah Jwara Rogadhikar 13-105) 250mg twice daily after meal with lukewarm water. 2. Neem (Bhav Prakash Nighantu, Guduchyadi Varga, sloka 94) 500mg twice daily after meal. 3. Kaishore guggulu (Sharangadhar Samhita Madhyama khanda 7/70-81) 250mg twice daily after meal.</td>
</tr>
<tr>
<td>24/01/19 to 25/03/19 (for 2 months)</td>
<td>Mahamarichyadi taila + Gudduchi taila</td>
<td>1. Gudduchyadi louha 250mg twice daily after meal. 2. Sarivadya asava (Bhaisajya Ratnavali Prameha Pidaka adhikar 22-27) 20ml twice daily with water after meal.</td>
</tr>
<tr>
<td>For next one month</td>
<td>-</td>
<td>1. Gilloy sattwa (Yogaratnakara Rajayakshma Chikitsa 1/11) 125mg twice daily with water.</td>
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</table>

There was gradual improvement in skin lesions within 1 month. Gradually the papular lesions converted into macules. Itching sensation also decreased gradually.
DISCUSSION
It was difficult to correlate granuloma annulare with any of the different kustha rogas. However, some features of mandala kustha described in Ayurveda somewhat resembles granuloma annulare. The treatment was described based on dosa dhatu predominance. The symptoms indicated vitiation of pitta-kapha dosa along with rasa & rakta dhatu dusti. Mridu virechana was given with Arogyavardini vati which proved helpful for kosta sudhi. Kaishore guggulu is a proven anti-inflammatory agent which is known to remove the toxic metabolite from the body. Neem is an anti-septic agent. Mahamarichyadi taila has anti-septic anti-inflammatory and anti-fungal properties. Gudduci taila is kusthaghna and described as sneha kalpana for treatment of kustha roga. Sarivadyasava is a natural blood detox product. Gudduchyadi louha is used as rasayan to improve the immune system of the body. After completion of 4 months of treatment patient got observable significant relief in skin lesions. Thus his quality of life markedly improved. However, patient is still on regular follow up every month and free from cutaneous lesions.

CONCLUSION
Thus this case study shows that granuloma annulare can be successfully managed with Ayurvedic intervention. It is supportive for further research in granuloma annulare.

REFERENCES
2. https://en.m.wikipedia.org/wiki/Granuloma_annulare

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