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# Focal and diffuse vascularization are overlooked cystoscopic findings and relationship between intravesical therapy response in bladder pain syndrome

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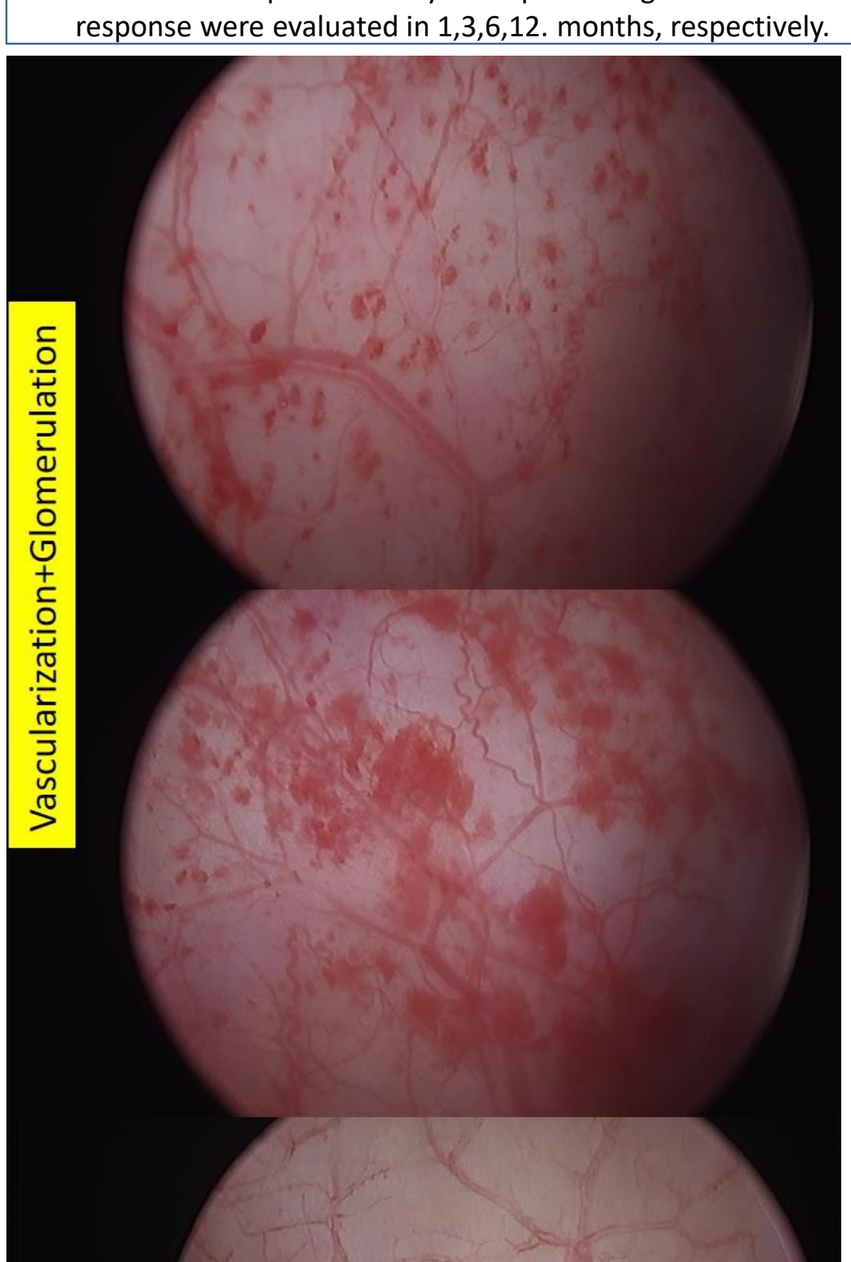
## Introduction

- Several studies that failed to find a relationship between symptom reports and cystoscopic findings were performed with patients undergoing intravesical thearpy for BPS/IC.
- In this study, we investigated the relationship between cystoscopic findings and intravesical therapy response in patients with BPS/IC

## Methods and Materials

- We retrospectively queried our institutional records for all patients undergoing cystoscopy and our institutional experience with hydrodistention and early started intravesical combined therapy (ICT) (chondroitin sulphate and Hyaluronic acide).
- After hydrodistention all patients have received ICT in two hours. Additionally ICT was continued once a week till 8. week, 2 times in followed month and then monthly throughout 7 months (17 times in total).
- Cystoscopic findings were noted as glomerulations, focal or diffuse vascularization with or without glomerulation and Hunner's Lesion (HL).
- The therapy responses were evaluated with VAS (Visual analoque scale), O´Leary/Sant ICSI (Interstitial cystitis symptom index) and ICPI (Interstitial cystitis problem index) scores.
- The relationship between cystoscopic findings and intravesical therapy response were evaluated in 1,3,6,12. months, respectively.




## Results

- There were 55 patients identified as bladder pain syndrome/interstitial cystitis and followed. In this group there were 34 patients who underwent hydrodistention and early started ICT.
- Hunner's lesions were seen during cystoscopy in 4 (11.8%) of those patients. Glomerulations were seen during cystoscopy in 15 (44.1%) of those patients. Vascularization was seen during cystoscopy in 13 (38.2%) of those patients.In 2 patients (5.8%) there were no pathological findings.
- 26 patients' in 3.month , 16 patients in 6. Month and 12 patients' follow up was fulfilled in 12. Month. Mean VAS, ICSI, ICPI scores were decreased in glomerulations group at total follow up. (Table-1)
- However 9 of 13 patients (70%) with only vascularization had no response to intravesical therapy. Four of the thirteen patients had vascularization and additionally glomerulation, those patients had good treatment response.

## Discussion

- Bladder pain syndrome/interstitial cystitis (BPS/IC) is a chronic disease characterized by pelvic pain, frequency and urgency; which effects quality of life terribly.
- Several treatment strategies are defined, restoration of the urothelial barrier with exogenous GAG administration is one of the choices(1).
- According to some studies HA/CS combination therapy appears to be effective with a potentially more favorable safety profile (2,3). But there are no studies defining the factors that effects the success of intravesical therapy.
- With this study we showed that cystoscopic findings might play important role choosing treatment strategy.It can be seen that in glomerulation group benefit of the intravesical HA/CS therapy continues till 12. Month. Patients with vascularization and Hunner lesion had poor treatment response and those patients might be directed to other treatment strategies. Nine of thirteen patients (70%) with only vascularization had poor response to intravesical therapy on the other side four of the thirteen patients had vascularization and additionally glomerulation, those patients had good treatment response. Glomerulation might be a criteria for choosing intravesical therapy as treatment strategy.
- In our study, cystoscopic findings were defined according to ESSIC criteria. Focal and diffuse vascularization is not a finding that has been defined yet. In follow up of those patients it has been seen that some group of patients did not respond to intravesical treatment. Those patients had only vascularization as cystoscopy finding , other than ESSIC criteria. Vascularization is a new cystoscopic identification has some own characteristics, especially in treatment response.
- When groups were splitted in 12. Month responses , in some groups, mean-median scores could not be computed because of little number of patients. Our first limitation is small sample size . With multiinstutional studies these findings can be more precise.

Table1:

| | Before Treatment | 1. Mo | 3.Mo | 6.Mo | 12. Mo | p | |
|---|---|---|---|---|---|---|---|
| VAS (ave) | 81,2 | 33,3 | 31,9 | 39,4 | 46,7 | <0,05* | |
| -No findings | 85 | 5 | 25 | 30 | | 0,18 | |
| -Glomerulations | 85,4 | 35 | 35,8 | 43,3 | 55 | 0,03 | 0,03-0,03-0,07-0,14 *** |
| -Focal vascularization | 100 | 75 | 75 | 50 | | 0,32 | |
| -Diffuse vascularization | 91,7 | 40 | 43,3 | 25 | | 0,07 | |
| -Vascularization+Glomerulations | 65 | 40 | 3,3 | 30 | | 0,11 | |
| -Hunner lesion | 70 | 6,7 | 20 | 40 | 36,6 | 0,11 | |
| ICSI (ave) | 15,7 | 9,9 | 9,9 | 8,1 | 12,2 | 0,00 | 0,00-0,00-0,00 |
| -No findings | 13,5 | 6,5 | 4 | 2 | | 0,18 | |
| -Glomerulations | 15,5 | 9,3 | 9,9 | 7,1 | 11,3 | 0,002 | 0,002-0,005-0,02 |
| -Focal vascularization | 18 | 10 | 8 | 5 | | 0,18 | |
| -Diffuse vascularization | 17,8 | 12,2 | 14 | 10 | | 0,07 | |
| -Vascularization+Glomerulations | 14 | 13,5 | 11,7 | 10 | | 0,31 | |
| -Hunner lesion | 14,5 | 8,3 | 9 | 14 | 14 | 0,11 | |
| ICPI (ave) | 13,1 | 8,4 | 8,4 | 7,1 | 9,8 | 0,00 | 0,00-0,00-0,00 |
| -No findings | 11 | 6,5 | 3,5 | 2 | | 0,18 | |
| -Glomerulations | 13,7 | 7,9 | 9,1 | 6,3 | 10,5 | 0,00 | 0,00-0,00-0,01 |
| -Focal vascularization | 15,7 | 9 | 8 | 7 | | 0,18 | |
| -Diffuse vascularization | 12,8 | 9,8 | 13,3 | 8,5 | | 0,11 | |
| -Vascularization+Glomerulations | 11 | 11 | 8 | 8 | | 0,32 | |
| -Hunner lesion | 13,7 | 7 | 7,3 | 10,5 | 9,7 | 0,11 | |

*VAS score:

1.Month vs Before Treatment p=0,00

3.Month vs Before Treatment p=0,00

6.Month vs Before Treatment p=0,005

12.Month vs Before Treatment p=0,015

**When groups were splitted in 12. Month responses , in some groups, mean scores could not be computed because of little number of patients.

## Conclusions

- Focal or diffuse vascularization are overlooked cystoscopic findings in BPS/IC. The presence of vascularization has been associated with more severe symptoms and decreased ICT response. Patients with glomerulations as cystoscopy findings, might be good candidates for intravesical early started therapy.

## References

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