

**REVIEW TOPIC: “TREATMENT STRATEGIES OF  
VICARIOUS MENSTRUATION WITH NSAIDs**

## **Introduction:**

Vicarious menstruation is an uncommon condition, and its existence has been debated, with some experts questioning its validity. A review of documented cases reveals that many reports may be unreliable. However, there are well-documented instances that are difficult to dismiss, particularly cases where vicarious bleeding occurred consistently over years and stopped during pregnancy. This condition has been observed across a wide age range, from the onset of menstruation to menopause.

In some cases, the pelvic anatomy appears normal, while in others, abnormalities of the pelvis have been observed to obstruct menstrual flow; the site of bleeding varies greatly and may be the nose, lungs, stomach, rectum, eyes, ears, gums, bladder, nipples, or umbilicus; in other cases, bleeding may be restricted to certain areas, such as a leg ulcer, nevus, scar, or fistula; usually, the bleeding originates from a single site, but in rare instances, it has been seen at multiple sites reflecting the menstrual cycle.

**Vicarious menstruation, or cyclic bleeding from extra-genital organs, has been described in the skin, lacrimal system, conjunctiva, retina, kidneys, lungs, bladder, umbilicus, and nasal mucosa.**

A rare manifestation, haemolacria, involves bloody tears and requires extensive investigation to determine the underlying cause. Causes may include trauma, orbital varices, bleeding disorders, infections, ocular endometriosis, medication side effects, or psychological factors. To diagnose vicarious menstruation accurately, a thorough clinical history, physical examination, and diagnostic tests are essential. In complex Conditions or cases, a highly multidisciplinary approach may be required to reach a exact Or effective conclusion.

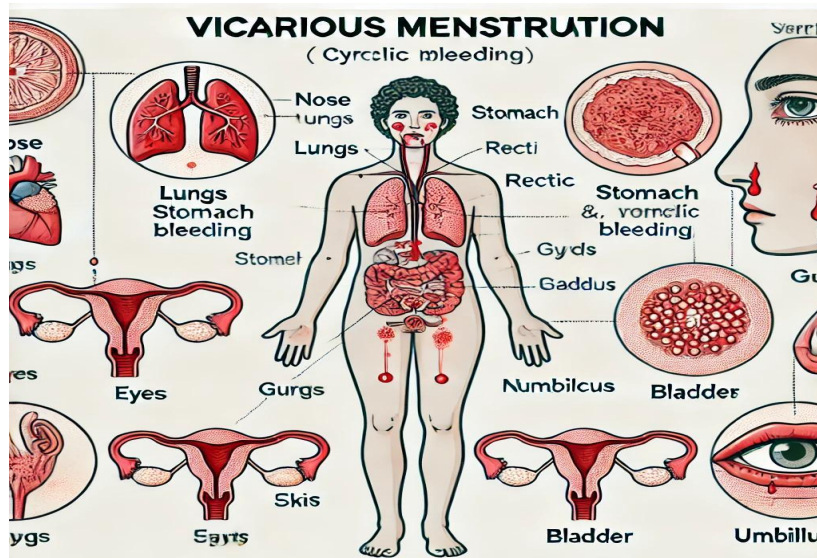


Figure no.01 Vicarious menstruation on various body parts

In this study, we examined the case of a young girl who experienced frequent “bloody tears” during her menstrual cycle. This is a unique clinical instance. This is the only recent example of its kind in the literature. More study is required to better understand the etiology and treatment of this condition.

**types of vicarious menstruation:**

Types	Description	Key Features	Theories/Mechanism
<b>Menstrual Synchrony</b>	When women’s cycles align or overlap, often due to shared proximity or pheromones.	<ul style="list-style-type: none"><li>• Proposed by Martha McClintock in 1971.</li><li>• Mixed evidence in studies.</li><li>• Influenced by age and social interaction.</li></ul>	<ul style="list-style-type: none"><li>• Pheromones influencing cycle regulation.</li><li>• Emotional bonds encouraging synchronization.</li><li>• Environmental factors like lighting or stress.</li></ul>
<b>Sympathetic Menstruation</b>	Women develop symptoms like cramps or mood changes in response to another’s menstrual cycle.	<ul style="list-style-type: none"><li>• Emotional contagion of feelings.</li><li>• Physical symptoms such as bloating or mood shifts.</li><li>• Enhanced empathy.</li></ul>	<ul style="list-style-type: none"><li>• Emotional resonance triggering physical effects.</li><li>• Hormonal responses linked to stress or empathy.</li></ul>
<b>Vicarious Menstrual Cramps</b>	Experiencing cramps due to emotional or empathetic	<ul style="list-style-type: none"><li>• Pain in the abdomen or lower back.</li><li>• Bloating and pelvic discomfort.</li></ul>	<ul style="list-style-type: none"><li>• Stress-induced hormonal changes.</li><li>• Emotional empathy for others’ pain.</li></ul>

	connection to another person's menstrual discomfort.	<ul style="list-style-type: none"> <li>• Often linked to stress or empathy.</li> </ul>	<ul style="list-style-type: none"> <li>• Medical conditions like endometriosis may contribute.</li> </ul>
<b>Indirect Menstruation</b>	A woman's cycle is influenced by another's without direct synchronization.	<ul style="list-style-type: none"> <li>• May include subtle changes in timing.</li> <li>• Proximity or emotional connection is a factor.</li> </ul>	<ul style="list-style-type: none"> <li>• Hormonal fluctuations influenced by environmental or emotional exposure.</li> </ul>
<b>Mirror Menstruation</b>	Women's cycles not only sync but also share similar patterns, timing, and duration.	<ul style="list-style-type: none"> <li>• Happens more in emotionally close relationships.</li> <li>• Includes similar durations of cycles.</li> </ul>	<ul style="list-style-type: none"> <li>• Shared phenomenal signals.</li> <li>• Strong social or emotional bonds.</li> <li>• Shared hormonal rhythms.</li> </ul>
<b>Telepathic Menstruation</b>	Alleged synchronization of cycles or symptoms despite physical distance, often in close emotional bonds.	<ul style="list-style-type: none"> <li>• Occurs between individuals with strong emotional or psychic connections.</li> <li>• Anecdotal in nature.</li> </ul>	<ul style="list-style-type: none"> <li>• Theoretical concepts like telepathic energy or collective unconscious.</li> <li>• Emotional resonance across distances.</li> </ul>

Table no. 01 Details about types of Vicarious menstruation

**Symptoms of vicarious menstruation :**

<b>Affected Area</b>	<b>Symptom</b>	<b>Description</b>
<b>Nose (Nasal bleeding)</b>	Epistaxis (nosebleeds)	Bleeding from the nose during menstruation.
<b>Gums (Oral bleeding)</b>	Bleeding gums	Bleeding from the gums that coincides with the menstrual cycle.
<b>Lungs (Pulmonary bleeding)</b>	Hemoptysis	Coughing up blood or blood-stained sputum during menstruation.
<b>Skin (Cutaneous bleeding)</b>	Petechiae or purpura	Small red or purple spots on the skin associated with menstruation.
<b>Eyes (Ocular bleeding)</b>	Blood-stained tears	Bleeding from the conjunctiva or blood-stained tears.
<b>Stomach or Abdomen</b>	Hematemesis	Vomiting blood during menstruation.
<b>Rectum (Gastrointestinal bleeding)</b>	Rectal bleeding	Blood in the stool or rectal bleeding corresponding to menstruation.
<b>Urinary Tract</b>	Hematuria	Presence of blood in urine linked to the menstrual cycle.
<b>Breasts</b>	Bloody nipple discharge	Blood-stained discharge from the nipples during menstruation.

<b>Ears (Otorrhagia)</b>	Bleeding from the ears	Rare bleeding from the ears during menstruation.
--------------------------	------------------------	--

Table no. 02 Symptoms of vicarious menstruation

Pathophysiology:

<b>Subtopic</b>	<b>Key terms</b>	<b>Explanation</b>
Mechanism of Ectopic Endometrial Bleeding	Transudation	Passive leakage of fluid and blood components from vessels into ectopic sites in response to hormonal changes, leading to cyclical bleeding.
Hormonal Influences	Endocrinopathy	Abnormal hormonal activity, particularly involving estrogen and progesterone, which stimulates ectopic

		endometrial tissue similar to intrauterine endometrium.
Common Sites (Nose, Eyes, Lungs, Skin)	Site-specificity	Tendency of certain mucosal and vascular-rich sites to exhibit ectopic bleeding due to their anatomical and physiological characteristics.
Relationship with Endometriosis and Hormonal Disorders	Co-manifestation	Simultaneous occurrence of vicarious menstruation with other conditions like endometriosis or hormonal imbalances, suggesting a shared pathological mechanism.

Table no. 03 pathophysiology of vicarious menstrual



## **Mechanism of Vicarious Menstruation:**

Vicarious menstruation is thought to occur when hormonally sensitive tissues outside the uterus respond to cyclical changes in estrogen and progesterone. These fluctuations can lead to increased vascular permeability and tissue fragility in ectopic sites, such as the nasal mucosa, eyes, lungs, or skin. Even in the absence of endometrial tissue at these locations, the hormonal influence can trigger bleeding that coincides with the menstrual cycle. In some cases, microscopic endometrial implants may exist and directly participate in the bleeding process.

## Vascular reactions to the hormone in the




Endometrial tissue's presence or absence at the extrauterine tissue




abnormal bleeding from the extra uterine sites

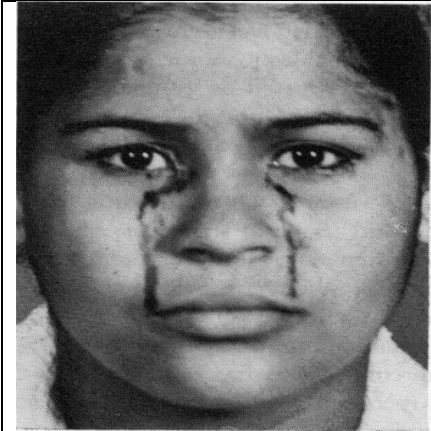


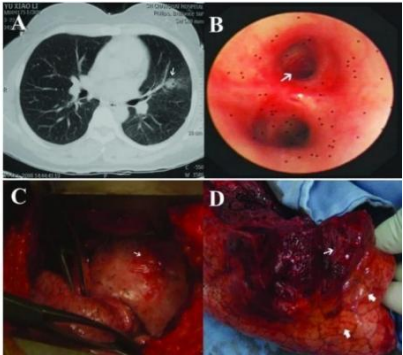
CASE STUDY


<u>Cases study</u>	<u>Paper</u> <u>reference</u>	<u>Causes</u>	<u>Treatment</u>
<p><b>Case -1</b></p> <p><b>Ocular                      vicarious</b></p> <p><b>menstruation</b></p> <p><b>When a lady complained about</b></p> <p><b>‘bloody tears,’ doctors were</b></p> <p><b>taken aback. The 25-year-old</b></p> <p><b>woman rushed to the</b></p> <p><b>emergency room of a</b></p> <p><b>Chandigarh hospital after</b></p> <p><b>crying bloody tears.</b></p>  <p><b>Bloody tears</b></p>	<p>1.   Dunn   JM.</p> <p>Vicarious</p> <p>menstruation. Am</p> <p>J ObstetGynecol,</p> <p>1972; 114: 568–9.</p>	<p>Ocular                      vicarious</p> <p>menstruation                      is</p> <p>produced by a range of</p> <p>ocular and systemic</p> <p>illnesses, which are</p> <p>ailments or traumas</p> <p>(damage) related with</p> <p>the eyes (ocular).</p>	<p>A 25-year-old woman</p> <p>was recommended to</p> <p>take                      oral</p> <p>contraceptives with a</p> <p>combination                      of</p> <p>estrogen                      and</p> <p>progesterone</p> <p>[Noretrel,                      ethinyl</p> <p>estradiol].                      Three</p> <p>months of follow-up</p> <p>showed no blood</p>

<p><b>Case -2</b></p> <p><b>Vicarious menstruation in primary localized conjunctival amyloidosis</b></p> <p>A 30-year-old lady experienced unilateral recurrent subconjunctival hemorrhaged for eight years.</p>	<p>1. Lee HM, Naor J, DeAngelis D, Rootman DS. Primary localized conjunctival amyloidosis presenting with</p>	<p><b>In addition to the close association between the size and presence of amyloid masses and the left-rightness of the sign, the incidence of inhibitory hemorrhage was</b></p>	<p>flow from the patient's eyes.</p> <p>The patient was diagnosed with orbital submenstrual period and was treated with clinical treatment and prominent oral contraceptives [levonorgestrel, etonogestrel].</p>
--	---	---	--

 <p><b>Subconjunctival mass in inferior fornix.</b></p> <p><b>Case -3</b></p> <p><b>Vicarious menstruation from conjunctiva</b></p> <p><b>The 17-year-old girl came to the outpatient clinic at the eye hospital in Tanta and complained about repeated bleeding.</b></p>	<p>recurrence of subconjunctival hemorrhage.</p> <p><i>Am J Ophthalmol.</i></p> <p>2000;129:245-247.</p> <p>.</p> <p>Br J Ophthalmol: first published as 10.1136/bjo.55.7.487 on 1 July 1971.</p> <p>Downloaded from <a href="http://bjo.bmj.co">http://bjo.bmj.co</a></p>	<p><b>the cause of the bleeding.</b></p> <p>Thorough medical care, gynecological, ear, nose and nose examinations were performed, but no cause of bleeding was found. The patient was unstable, tense and slightly excited.</p>	<p>Patients were treated with a large iron preparation for anemia until the parameters reached the normal range. Vitamin C was also prescribed.</p>
--	--	---	---

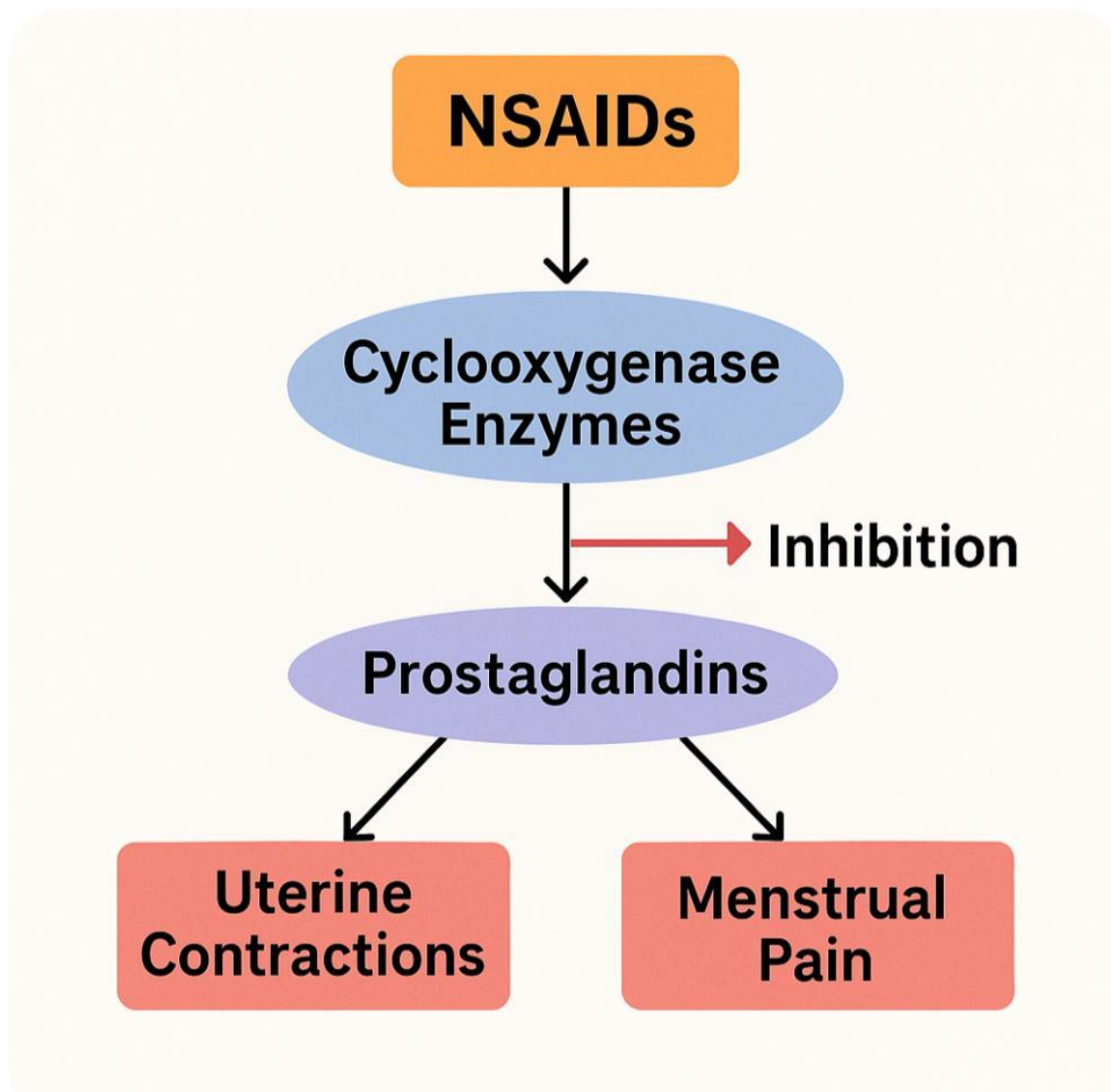
	<p>m/ on May 11, 2022 at India:BMJ-PG Sponsored.</p>		
<p><b>Vicarious menstruation from the conjunctiva</b></p>			
<p><b>Case 4</b></p> <p><b>Vicarious menstruation Likely case of pulmonary endometriosis</b></p> <p>In October, 1957, a 39-year- antique married nursing sister became visible due to the fact for the preceding years she had</p>	<p>Büngeler, W., Fleury Silveira, D. (1939) Arch.</p>	<p>Pneunomy diagnosed by Distinguished responds to menstruation and deals with fever,</p>	<p>NSAIDs such as streptomycin and P- aminosalcrिकासide, ibuprofen (Advair, Motrinib, etc.) and sodium naproxen (ALEVE) can help reduce surgical treatment for menstrual loss.</p>

<p>coughed blood while she had a menstrual period.</p>  <p><b>Case 5</b></p> <p><b>Retinal hemorrhaged as an expression of Vicarious menstruation</b></p> <p>Miss MS. White, 26 years old shows evidence of causal relationship with abnormal menstruation, the presence of blood in retinal tissue, and traces of previous retinal hemorrhage</p>	<p>Cirurg. clin. exp. 3, 169.</p> <p>1Jennings.</p> <p>Congenital rhabdomyoma of the orbit. Amer.</p>	<p>headaches, and lower back pain of pulmonary endometrium</p> <p>Ordinary menses, the presence of blood within side the retinal tissue, and the lines of preceding retinal hemorrhages,</p>	<p>(NSAIDs), Like ibuprofen and naproxen, slight blood loss can be minimized. Nutritional supplements can treat anemia. Hormonal replacement injections can treat hormonal imbalances.</p>
---	---	--	--

	<p>Jour. Opth., 1895, v. 12, July, p. 204 CLARENCE LOEB, M.D., Hubbard Woods, Illinois and S. J. MEYER, M.D., Chicago article</p>	<p>Menstrual irregularity, Anaemia, he morrhagic vesicles at the tongue.</p>	<p>She changed into given iron, arsenic and calcium chloride and Informed to absorb her meals as a whole lot gelatin as possible. She step by step progressed and on the cease of a Week there remained no proof of the hemorrhages, Besides for the swiftly diminishing anemia.</p>
<p>Case -6</p> <p><b>Vicarious menstruation on anaemic patient</b></p> <p>Mrs. E. F., aged thirty-six, applied in at Boston Municipal Hospital in December 1, 1903 in the Medical Outpatient Department. In the summer of 1902, he suffered from neglect of menstruation, and in December of the same year the mention of the uterus was</p>	<p>The Boston Medical and</p>		



completely caught up in and replaced with phenomenon	<p>Surgical Journal</p> <p>as published by</p> <p>The New England</p> <p>Journal of</p> <p>Medicine.</p> <p>Downloaded from</p> <p>nejm.org at The</p> <p>University Of</p> <p>Illinois on June</p> <p>26, 2016</p>		
--	---	--	--

**Mechanism of Action (NSAIDs):**

**Figure no. 02 mechanism of action of NSAIDs**

- NSAIDs function by blocking cyclooxygenase (COX) enzymes, particularly COX-1 and COX-2. These enzymes are crucial for the synthesis of

prostaglandins, which mediate pain, inflammation, and uterine muscle contractions during menstruation.

### **Prostaglandin Inhibition:**

Elevated prostaglandins during menstruation contribute to uterine spasms and excessive bleeding. NSAIDs reduce prostaglandin levels, leading to decreased uterine activity, less pain, and reduced blood loss.

### **Effectiveness in Dysmenorrhea:**

NSAIDs are a primary treatment for menstrual cramps due to their quick and consistent pain relief. Their success in dysmenorrhea supports their potential role in managing conditions like vicarious menstruation, where prostaglandin activity may also be a factor.

### **TREATMENT AND IT'S STRATEGIES:**

<p><b>Case -1:</b></p> <p><b>Ocular vicarious menstruation</b></p>	<ul style="list-style-type: none"> <li>• Estradiol [yasmin]</li> <li>• Levonorgestrel[levora]</li> <li>• Norethindrone[estrostepororthonovum]</li> <li>• Norgestrel[lo/ovral-28]</li> </ul>	<p>Dunn JM. Vicarious menstruation ISSN NO: 1434-9728/2191-0073 9. 10.1016/0002-9378(72)</p>
<p><b>Case -2:</b></p> <p><b>Vicarious menstruation in primary localized conjunctival amyloidosis</b></p>	<ul style="list-style-type: none"> <li>• [Norgestral, ethinyl estradiol]</li> <li>• Tranexamic acid [500mg]</li> <li>• Antibiotic for conjunctival amyloidosis Doxycycline 200mg/day and azithromycin T.D.S.</li> </ul>	<p>Dunn JM. Vicarious menstruation 9.</p>
<p><b>Case -3:</b></p> <p><b>Vicarious menstruation from conjunctival</b></p>	<ul style="list-style-type: none"> <li>• Moxifloxacin</li> <li>• Alglucerase, Carbonyl iron, Cyanocobalamine, Darbepoetin alpha until vitamin c was also prescribed.[Limcee,Vezee]</li> <li>• Opatanol</li> </ul>	<p>Dunn JM. Vicarious menstruation 9.</p>

<p><b>Case -4:</b></p> <p><b>Vicarious menstruation</b></p> <p><b>Likely case of</b></p> <p><b>pulmonary</b></p> <p><b>endometriosis</b></p>	<ul style="list-style-type: none"> <li>• Streptomycin and P-aminosalicylic acid NSAIDS such as Ibuprofen (Advil , Motrinib , others) or Naproxen sodium (aleve)</li> <li>• Pulmothorax TES</li> <li>• Buserelin 200 microgram</li> </ul>	<p>Tarlan B, Kiratli H. Sub</p> <p>potential indicators. C</p> <p>10.2147/OPTH.S35062</p>
<p><b>Case-5:</b></p> <p><b>Retinal hemorrhage as</b></p> <p><b>a secondary expression</b></p> <p><b>of menstrual</b></p>	<ul style="list-style-type: none"> <li>• (NSAIDs) such as [Ibuprofen or Naproxen],</li> <li>• [Ferrous XT, Folate ascorbate</li> <li>• Estrsadiol cypionate &amp; estradiol</li> <li>• Alerateinjection</li> <li>• Estradiol [yasmin]</li> <li>• Levonorgestral [levora]</li> </ul>	<p>Tarlan B, Kiratli H. Sub</p> <p>potential indicators. Clin C</p>

<b>Case -6:</b>  <b>Vicarious menstruation</b>  <b>on anaemic patient</b>	<ul style="list-style-type: none"> <li>• Ferrous ascorbate(100mg)+folic acid(1.5mg)</li> <li>• Arsenic tablets</li> <li>• Calcium gluconate injection</li> </ul>	Mimura T, Usui T, Yamaguchi S. Recent causes of submenstruation. J Obstet Gynaecol Jpn 2010;224(3):133–137. Doi: 10.1111/j.1449-2923.2010.02243.x
---	--	---

TABLE NO. 04 TREATMENT STRATEGIES

**Conclusion:**

This is a rare disease, but has no life-threatening consequences. If you experience something unusual in your body, it is important to see a doctor. Because this disease is caused by hormonal changes, administration of hormonal medications can stabilize the woman's condition with eye measurements. Therefore, submenstruation was encouraging and there were many who preferred whether menstruation was undesirable. Physiology was found to have worked under difficulties, but "it was not considered a pathological disease. Rather, it was a body attempt to regain balance. "In the case of sub menstrual periods, natural efforts to find out for blood are proven how intense they are. Exclude other causes of frequent etiology. As soon as a diagnosis is made, his management includes hormone therapy if it leads to ovulation suppression.

**REFERENCE**

1. Abboud IA, Hanna LS. Bleeding from the conjunctiva. Br J Ophthalmol. 1971;55:487–91.
2. Ashwell S. A practical treatise on the diseases peculiar to women. London: Samuel Highley; 1846.

3. Bajwa SK, Singh S, Bajwa SJS. Ocular tissue response to sex hormones. *Indian J Endocrinol Metab.* 2012;16:488–9.
4. Dunn JM. Vicarious menstruation. *Am J Obstet Gynecol.* 1972;114:568–9.
5. Barat M, Kwedar SA. Ocular vicarious menstruation. *J Pediatr Ophthalmol Strabismus.* 1988;25:254–5.
6. Barnes R. *Clinical history of the diseases of women.* London: Churchill; 1873.
7. Barnes R. On vicarious menstruation. *Br Gynaecol J.* 1887;2:151–77.
8. Bundell J. *Observations on some of the more important diseases of women.* London: Cox; 1837.
9. Churchill F. *Outlines of principal diseases of females.* Dublin: Keene; 1838.
10. Dua P, Pointdujour R, Reich I, et al. Orbital vicarious menstruation. *Ophthalmic Plast Reconstr Surg.* 2014;30\:\e35–7.
11. Duke-Elder S. *System of ophthalmology.* 5<sup>th</sup> ed. London: Henry Kimpton; 1965.
12. Fridenberg P. Vicarious menstruation into the retina, followed by detachment and retinitis striata. *Trans Am Ophthalmol Soc.* 1903;10:116–24.
13. Gauba V, Cooper M, Liu C. Vicarious menstruation in primary localized conjunctival amyloidosis. *Arch Ophthalmol.* 2006;124:1361–2.
14. Horn ILS. *Acta Ophthalmol (Kbh).* 1857; *Arch Gen.* 1977;55:132.
15. Hynek RW. *Konnersreuth: A medical and psychological study of the case of Teresa.* London; 1932.
16. Israel SL. *Diagnosis and treatment of menstrual disorders and sterility.* 4<sup>th</sup> ed. New York: Hoeber; 1961.
17. James R, Bharadhi M, James J. Haemolacria in a 22-year-old boy. *BMJ Case Rep.* 2018;11\:\e225151.

18. James R, Trevor RS. *Br J Ophthalmol*. 1918;2:129.
19. Javert CT. *Am J Obstet Gynecol*. 1951;62:477.
20. Jeffcoate TNA. *Principles of gynaecology*. 3<sup>rd</sup> ed. London: Butterworths; 1967. P. 704.
21. Jessop WH. *Trans Ophthal Soc U K*. 1895;15:64.
22. Lee HM, Naor J, DeAngelis D, et al. Primary localized conjunctival amyloidosis presenting with recurrence of subconjunctival hemorrhage. *Am J Ophthalmol*. 2000;129:245–7.
23. Neumann. Translated by LC Sheppard. London: Burns, Oates and Washbourne.
24. Ottovay E, Norn M. Occult haemolacria in females. *Acta Ophthalmol*. 1991;69:544–6.
25. Roy FH. *Ocular differential diagnosis*. 4<sup>th</sup> ed. Philadelphia: Lea and Febiger; 1989. P. 120–1.
26. Slem G, Kumi M. Bloody tears due to congenital factor VII deficiency.
27. Sridharan S, Mehta R, Shukla D, et al. Munchausen syndrome masquerading as bleeding disorder in a group of pediatric patients. *Indian J Psychol Med*. 2011;33:86–8.
28. Sobol EK, Barmettler A. A case of idiopathic bilateral hemolacria in an 11-year-old girl. *Ophthalmic Plast Reconstr Surg*. 2017;33\:\:e98–9.
29. Ghosh S, et al. Rare case of tears: Ocular vicarious menstruation. *Case Rep*. 2021.
30. Türkçüoğlu I, Türkçüoğlu P, Kurt J, et al. Presumed nasolacrimal endometriosis. *Ophthalmic Plast Reconstr Surg*. 2008;24:47–8.
31. Tarasova LN, Briukhina EV. \[A case of vicarious menstrual bleeding from the conjunctiva]. *Vestn Oftalmol*. 1991;107:59.
32. Wilks SB. Discussion of vicarious menstruation. *Br Gynaecol J*. 1887;2:177–83.
33. Yazici B, Ucan G, Adim SB. Cavernous hemangioma of the conjunctiva: Case report. *Ophthalmic Plast Reconstr Surg*. 2011;27\:\:e27–8.



