

Clinical outcomes of ayurvedic Management in *Arjuna* (Subconjunctival Haemorrhage): A Case Series

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Abstract

Arjuna is a *Shuklagata Netra Roga* mentioned in Ayurveda characterized by painless, bright red lesion over *Shukla Mandala* with predominance of *Pitta* and *Rakta Dosha*. Its clinical features are very similar to subconjunctival haemorrhage (SCH), a common ocular condition caused by rupture of the conjunctival capillaries, which produces a well demarcated red patch over the sclera. In this case series we describe three patients, aged between 25 and 40 years, with an acute unilateral subconjunctival hemorrhage. On clinical examination, there was focal or diffuse subconjunctival haemorrhage without corneal or anterior chamber involvement. All patients were diagnosed as Arjuna on the basis of clinical features according to Ayurvedic principles.

All the three patients were administered with Ashchyotana by Aja Paya (goat's milk), *Mahamanjishtadi Kashaya* (15 mL twice daily before food with 45 mL water) and Lakshadi Guggulu (2 tablets twice daily after food) for 7 days. All patients showed progressive resolution of subconjunctival hemorrhage with reduction in ocular redness and symptomatic improvement by the end of treatment. During the follow-up period, no recurrence or adverse events related to the treatment were observed.

This case series demonstrates that Ayurvedic management based on the principles of *Arjuna Chikitsa* was associated with favourable clinical outcome in patients with subconjunctival haemorrhage. However, larger controlled clinical studies are needed to confirm these preliminary observations.

Key words : Arjuna, Subconjunctival hemorrhage, Case series, *Ashchyotana*, *Kriyakalpa*, Ayurveda.

Acharya Vagbhata has described *Arjuna* as one of the *Shuklagata Netra Rogas*. It is a painless (*Niruja*), smooth (*Shlakshna*), bright red (*Shasha-rudhira-nibha*) lesion over the Shukla Mandala and indicates predominant vitiation of Pitta and Rakta Dosha⁷. *Arjuna* is mentioned by Acharya Vagbhata as a *Sadhya Vyadhi* and indicates a favourable prognosis with proper treatment⁸. It should be managed according to the principles of *Raktabhishyanda Chikitsa* using local ocular therapies (*Kriyakalpa*) together with appropriate internal medications to pacify vitiated Pitta and Rakta Dosha and restore ocular health, as described by Acharya Sushruta^{5,6}.

Arjuna's clinical presentation closely resembles subconjunctival haemorrhage (SCH), a common ocular disorder caused by rupture of conjunctival capillaries with extravasation of blood beneath the bulbar conjunctiva. Clinically, SCH appears as a sharply demarcated bright-red patch over the sclera and is usually painless with little or no effect on visual acuity. Although generally benign and self-limiting, its sudden onset often causes anxiety and prompts patients to seek ophthalmic consultation.³

The pathogenesis of SCH is multifactorial and includes spontaneous occurrence, systemic hypertension, diabetes mellitus, anticoagulant therapy, bleeding disorders, ocular trauma, conjunctival inflammation, contact lens wear, vigorous eye rubbing and Valsalva manoeuvres. Among these, systemic hypertension is considered one of the major risk factors, particularly in elderly individuals^{2,10}.

Current management is largely conservative and includes reassurance, treatment of underlying systemic or ocular disorders, and lubricating eye drops for symptomatic relief when required. However, no established pharmacological treatment has been shown to accelerate the resolution of subconjunctival haemorrhage^{3,10}.

Keeping in view the close resemblance between the classical description of *Arjuna* and the clinical features of SCH, the present case series was carried out to evaluate the clinical outcome of Ayurvedic management using *Ashchyotana* with *Aja Paya*, *Mahamanjishtadi Kashaya* and *Lakshadi Guggulu* in patients presenting with subconjunctival haemorrhage. Hence, the present case series aimed to evaluate the clinical outcome of Ayurvedic therapy in patients with *Arjuna* (subconjunctival haemorrhage).

Case Presentation :

Case 1.

A 25-year-old male patient presented to Shalakya Tantra Outpatient Department with a history of sudden painless redness of right eye for two days after an episode of forceful coughing. No history of ocular trauma, diabetes mellitus, bleeding disorders or anticoagulant therapy was noted. Best-corrected visual acuity was 6/6 in both eyes. Slit lamp examination showed localized subconjunctival haemorrhage in the temporal bulbar conjunctiva with normal cornea, anterior chamber, pupil and fundus. The condition was diagnosed as subconjunctival haemorrhage, known as *Arjuna* in Ayurveda, based on the clinical findings.

Case 2.

A 30-year-old female presented with redness of left eye associated with mild foreign body sensation for one day. She had a history of rubbing her eyes vigorously before the onset of symptoms. There was no history of systemic illness or previous eye disease. Best-corrected visual acuity was 6/6 in each eye. Slit-lamp examination showed subconjunctival hemorrhage of the inferior bulbar conjunctiva without corneal or anterior chamber involvement. The clinical diagnosis was subconjunctival hemorrhage and in Ayurvedic diagnosis correlated to Arjuna.

Case 3.

A 39-year-old man presented with sudden painless redness of the right eye for 3 days. He was a known hypertensive patient with irregular compliance of antihypertensive medication. Best corrected visual acuity was 6/9 in the right eye and 6/6 in the left eye. On slit lamp examination diffuse subconjunctival hemorrhage was seen on nasal inferior and temporal region of bulbar conjunctiva. The remaining anterior and posterior segment findings were normal. The diagnosis was subconjunctival haemorrhage which was correlated with Arjuna in Ayurveda.

Table-1. Baseline Demographic and Clinical Characteristics of the Patients

Characteristic	Case 1	Case 2	Case 3
Age (years)	25	30	39
Sex	Male	Female	Male
Eye Involved	Right (OD)	Left (OS)	Right (OD)
Duration of Symptoms	2 days	1 day	3 days
Chief Complaint	Sudden painless redness in right eye	Redness with mild foreign body sensation in left eye	Sudden redness in right eye
Etiology/Risk Factor	History of forceful coughing	Eye rubbing	Uncontrolled hypertension
Visual Acuity	6/6 OU	6/6 OU	6/9 OD, 6/6 OS
Intraocular Pressure (mmHg)	16	15	18
Extent/Site of SCH	Temporal bulbar conjunctiva	Inferior bulbar conjunctiva	Diffuse nasal and temporal conjunctiva
Systemic Comorbidities	None	None	Hypertension
Ayurvedic Diagnosis	Arjuna	Arjuna	Arjuna

Table-2. Clinical Findings

Parameter	Case 1	Case 2	Case 3
Visual acuity	6/6 OU	6/6 OU	6/9 OD, 6/6 OS
Affected eye	Right (OD)	Left (OS)	Right (OD)
Extent of haemorrhage	Temporal bulbar conjunctiva ($\approx 75\%$)	Inferior bulbar conjunctiva ($\approx 30\%$)	Diffuse nasal and temporal bulbar conjunctiva ($\approx 70\%$)
Pain	Absent	Mild	Absent
Watering	Absent	Mild	Absent
Foreign body sensation	Absent	Present	Mild
Photophobia	Absent	Absent	Absent
Blood pressure	122/80 mmHg	118/76 mmHg	152/96 mmHg
Other systemic findings	No significant findings	No significant findings	Known hypertension on irregular medication

Table-3. Diagnostic Assessment

Parameter	Case 1	Case 2	Case 3
Provisional Diagnosis	Subconjunctival Hemorrhage	Subconjunctival Hemorrhage	Subconjunctival Hemorrhage
Final Diagnosis	Subconjunctival Hemorrhage	Subconjunctival Hemorrhage	Subconjunctival Hemorrhage
Ayurvedic Diagnosis Best	Arjuna	Arjuna	Arjuna
Corrected Visual Acuity	6/6 OU	6/6 OU	6/9 OD, 6/6 OS
Slit-lamp Examination	Localized temporal SCH	Inferior SCH	Diffuse SCH involving nasal, inferior and temporal region
Cornea	Clear	Clear	Clear
Anterior Chamber	Normal	Normal	Normal
Pupillary Reaction	Normal	Normal	Normal
Intraocular Pressure	16 mmHg	15 mmHg	18 mmHg
Fundus Examination	Within normal limits	Within normal limits	Within normal limits

Therapeutic Intervention :

Table-4. Timeline of Therapeutic Intervention

Treatment	Dose and Administration	Duration
Ashchyotana with Aja Paya (Goat's milk)	3 drops instilled into the affected eye, three times daily	7 days
Mahamanjishtadi Kashaya	15 mL with 45 mL lukewarm water, twice daily before food	7 days
Lakshadi Guggulu	Two tablets twice daily after food	7 days



Fig. 1 CASE-1



Fig. 2 CASE-2



Fig. 3 CASE-3

Follow-up and Outcomes :

All three patients were evaluated during treatment and at follow-up to assess the resolution of subconjunctival haemorrhage, improvement in associated symptoms, visual acuity, recurrence, and treatment-related adverse

events. Progressive reduction in conjunctival haemorrhage and ocular redness was observed in all three cases throughout the treatment period. Complete or near-complete resolution was achieved by the end of treatment, with no recurrence or adverse events reported during follow-up.

Table-5. Follow-up and Clinical Outcomes

Parameter	Case 1	Case 2	Case 3
Resolution of subconjunctival haemorrhage	Almost Complete (Day 7)	Complete (Day 8)	Near-complete (Day 7), complete at follow-up
Reduction in ocular redness	(>90 %) reduction	Complete resolution	(>75 %) reduction
Pain	Absent throughout	Resolved	Absent throughout
Foreign body sensation	Absent	Resolved	Resolved
Visual acuity at final visit	6/6 OU	6/6 OU	6/9 OD, 6/6 OS (unchanged)
Recurrence during follow-up	None	None	None
Adverse events	None	None	None

Arjuna is a painless (*Niruja*), smooth (*Shlakshna*), bright-red (*Shasha-rudhira-nibha*) lesion of the Shukla Mandala, described by Acharya Vagbhata as a Shuklagata Netra Roga, closely resembling subconjunctival haemorrhage (SCH)^{7,8}. SCH results from rupture of superficial conjunctival capillaries with localized accumulation of blood beneath the bulbar conjunctiva and is generally

associated with little or no pain and no significant visual impairment.³ This close similarity provides a rational basis for correlating Arjuna with SCH.

According to Ayurveda, Arjuna is primarily a disorder of *Pitta* and *Rakta Dushti*, affecting the Raktavaha and Netravaha Srotas. Therefore, treatment is directed towards Pitta-

Rakta Shamana, Rakta Prasadana, and restoration of ocular tissue integrity. In the present cases, *Ashchyotana* was performed with Aja Paya, while Mahamanjishtadi Kashaya and Lakshadi Guggulu were administered orally according to the principles of Raktabhishyanda Chikitsa described by Acharya Sushruta^{5,6}.

Ashchyotana enables direct local delivery of medication to the ocular surface. Aja Paya, possessing Madhura Rasa and Sheeta Veerya, is traditionally indicated for Pitta-Rakta disorders because of its cooling, soothing and nourishing properties^{8,9}.

The principal ingredients of *Mahamanjishtadi Kashaya*, including *Manjistha* (*Rubia cordifolia* L.), *Haridra* (*Curcuma longa* L.), *Daruharidra* (*Berberis aristata* DC.) and *Sariva* (*Hemidesmus indicus* (L.)R.Br.), possess antioxidant, anti-inflammatory, *Rakta Prasadana*, and *Pitta Shamaka* activities. These pharmacological properties may contribute to reducing vascular inflammation, promoting resorption of extravasated blood, and restoring conjunctival tissue homeostasis^{1,4,9,11}.

Lakshadi Guggulu was administered as an adjunct because of its classical indication in tissue repair and healing, which may support restoration of conjunctival microvascular integrity⁹.

Modern management of SCH remains largely conservative because the condition is self-limiting and generally resolves within one to three weeks without any specific pharmacological intervention.^{3,10} In the present case series, all three patients showed progressive resolution of haemorrhage and improvement

in associated symptoms without adverse events or recurrence. Although spontaneous resolution cannot be completely excluded, the favourable clinical outcome and good tolerability suggest that this Ayurvedic regimen may serve as a safe supportive treatment while correcting the underlying Pitta-Rakta imbalance.

The limitations of this study include the small sample size, absence of a control group, lack of objective grading of haemorrhage and short follow-up period. Therefore, these findings should be considered preliminary, and larger prospective controlled studies with standardized outcome measures are required to establish the efficacy and safety of this treatment protocol.

This case series suggests that Ayurvedic management of *Arjuna* using *Ashchyotana* with *Aja Paya*, *Mahamanjishtadi Kashaya* and *Lakshadi Guggulu* was feasible, well tolerated and associated with progressive resolution of subconjunctival haemorrhage without treatment-related adverse events. However, as SCH is a self-limited disease and this series lacked a control group, these findings should be interpreted cautiously. Well designed prospective controlled studies with larger sample size are required to evaluate the efficacy, safety and possible role of Ayurvedic interventions in the management of *Arjuna* (subconjunctival haemorrhage).

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