Spontaneous subarachnoid hemorrhage prognosis

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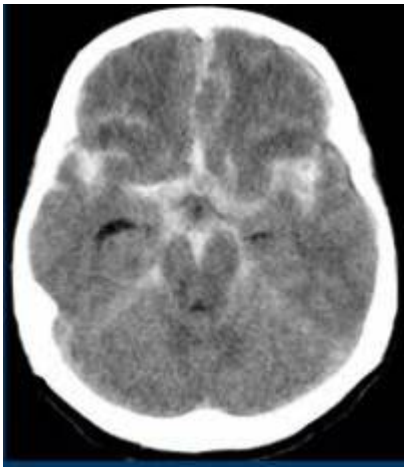

The prognosis for spontaneous subarachnoid hemorrhage (SAH) can vary widely based on several factors, including the severity of the hemorrhage, the patient's overall health, the speed of medical intervention, and the presence of any complications.

Severity and Initial Presentation: The initial severity is often assessed using subarachnoid hemorrhage scales. Patients with a higher grade (more severe) generally have a poorer prognosis. The initial presentation can also include factors like the amount of bleeding and whether there is a decrease in consciousness.

Early subarachnoid hemorrhage treatment: Rapid medical intervention, including securing the aneurysm (if present), controlling blood pressure, and managing complications, can significantly improve outcomes. Prompt treatment can help reduce the risk of rebleeding and other complications.

Complications: Complications such as vasospasm (narrowing of blood vessels), hydrocephalus (accumulation of cerebrospinal fluid), and seizures can affect recovery. Managing these complications effectively is crucial for a better outcome.

Recovery and Rehabilitation: Long-term recovery may involve physical, occupational, and speech therapy. The extent of recovery depends on the initial severity of the hemorrhage and any complications that arose during the acute phase.

Statistical Outcomes: In general, the mortality rate for SAH can be high, with estimates ranging from 30% to 50% depending on the severity and the timeliness of treatment. Among survivors, many will experience significant recovery, though some may have lasting neurological deficits or cognitive impairments.

Overall, the prognosis is highly individualized. Factors such as age, pre-existing health conditions, and the speed and quality of medical care all play important roles in determining the outcome. If you or someone you know is dealing with SAH, it’s important to work closely with medical professionals to understand the specific prognosis and treatment plan.

Aneurysmal subarachnoid hemorrhage outcome

see also Aneurysmal subarachnoid hemorrhage outcome.

Kenya

Waveru et al., conducted a retrospective multicentre cross sectional study involving patients admitted with SAH to three referral hospitals in Nairobi. All patients with a confirmed (primary) discharge diagnosis of first-time SAH between January 2009 and November 2017 were included (n = 158). Patients who had prior head trauma or cerebrovascular disease (n = 53) were excluded. Telephone interviews were conducted with surviving patients or their next of kin to assess out-of-hospital outcomes (including functional outcomes) based on modified Rankin Scale (mRS) scores. Chi-square and Fisher's exact tests were used to assess associations between mortality and functional outcomes and sample characteristics.

Of the 158 patients sampled, 38 (24.1%) died in hospital and 42 (26.6%) died within 1 month. In total, 87 patients were discharged home and followed-up in this study, of which 72 reported favourable functional outcomes (mRS ≤2). This represented 45.6% of all patients who presented alive, pointing to high numbers of unfavourable outcomes post SAH in Kenya.

Mortality following SAH remains high in Kenya. Patients who survive the initial ictus tend to do well after treatment, despite resource constraints. : The study findings should be interpreted with caution because of unavoidable limitations in the primary data. These include its retrospective nature, the high number of patients lost to follow up, missing records and diagnoses, and/or possible miscoding of cases [1)].

Prospective multicentre observational studies

A prospective multicentre observational study on SAH was held in Northeast Spain, 2020-2022 (HSACat project). All public tertiary hospitals participated in a common registry. Primary endpoints

were functional outcomes (modified Rankin Scale, mRS) and mortality at 12-months. Secondary aims included epidemiological data, flux of patients between referral and tertiary hospitals, diagnostic and treatment delays, and in-hospital complications.

Of 550 SAH cases reported in Catalonia (2020-2022), 474 had a complete registry for analysis. Death rate was 20.6% during hospital admission and 26.9% at one year. Good functional outcome (mRS 0-2) was observed in 63.4%, 70.1% and 76.0% at 3, 6 and 12 months. Age at presentation was lower in men, smokers, and hypertensives ($p<0.05$). The female:male ratio was 3:2, except in non-aneurysmal group. Time from onset to tertiary-hospital admission was longer in rural than metropolitan zones (7.0h vs 4.7h, $p<0.01$). Aneurysm occlusion in the first 72h was achieved in 83.3%; mainly endovascularly (77.5%) than microsurgically (19.3%).

Even when most patients received timely aneurysm treatment, rates of case fatality are considerably high. Data provided by the HSAcat project may have public health repercussions and be used to guide prevention programs and screening strategies [2)]

2014

In a multicenter, prospective and observational study. Including SAH admissions in ICU over 2014. Variables analized: epidemiological, cause of SAH, if aneurysmal SAH: aneurysm location and size, repair treatment; complications, ICU and hospital lenght of stay and morbidity (GOS scale).

Sample size: 127 patients. Epidemiology data: age 60,46 years (SD 12, 07), 54,33% women and risk factors: HBP 40,16%, dyslipidemia 22,05% and DM 6,30%. Severity scales: Hunt-Hess V: 23,62%, IV 13,39%; Fisher IV: 65,87 %, III 16,67 %; WFNS V: 22,83 %, IV 18,90%. Cause of SAH: 70,97% aneurysmal, 4,03% arteriovenous malformation (AVM) and 25% other. Aneurysm location: anterior comunicant 27,27%; posterior 21,21 %; middle cerebral artery 26,26 %. Aneurysmal sack diameter: small (< 15 mm) 67,05 %, large 22,73% and giant (>25 mm) 10,23%. Repair treatment: surgical 20,63%, endovascular (EVT) 39,68 % and conservative 39,68 %. Time admission-repairment: 3,5 days (SD 11,35), median 1 day (IQR 1). Complications: vasospasm 20,47 %, rebleeding 12,7%, delayed cerebral ischemia (DCI) 26,19%, hydrocephalus 31,75 %, seizures 7,14 %, ventriculitis 6,35% (22,86% with ventricular drainage), heart complications 15,87% and sodium disorders 20,47% (cerebral salt wasting 7,14%, SIADH 2,38% and diabetes insipidus 11,11%). Invasive monitoring: ICP 22,40% and PtiO2 6,60%. Median of length of stay: ICU 5 days (IQR 14) and hospital 15,5 days (IQR 22). Morbidity-GOS scale: 1 (death)= 23,39 % (51,72% donors); 2 = 3,23 %; 3 = 8,06 %; 4: 12,90%; 5: 52,42%.

The most common cause of SAH is cerebral aneurysm rupture with high Fisher. In this study the endovascular and conservative treatment are the same frequency greater than surgical. Maybe the severity of clinical presentation and high variability in the election of treatment among centers could influence. Time admission-repairment was near to recommendations. Results about complications and GOS scale are similar to the literature [3)].

References

1)
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