



Review Article

The Effects of Essential Hypertension in Endovascular Treatment of Unruptured Aneurysm

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Abstract

The term aneurysm refers to the weakening or the enlargement of the walls of the artery that creates a bulging or the enlargement of the arterial wall. Most of the aneurysm does not show dangerous symptoms, but the severe stage can rupture that leads to life-threatening internal bleeding. Sudden severe headaches characterize an unruptured aneurysm. It is the key symptom, often described as the worst headache. Other common signs and symptoms include difficulty in speaking, loss of balance, and visual disturbances. It is vital to note that most aneurysms do not show symptoms and are not dangerous. Still, at the severe stage, some can rupture and lead to life-threatening internal bleeding.

Keywords: Aneurysm; Arterial; Unruptured

Introduction

An unruptured aneurysm is the ballooning in a blood artery in the brain that creates a bulge or the enlargement of the arterial walls [1-4]. The key symptom of the unruptured aneurysm is a sudden severe headache. In some cases, it is coupled with the loss of balance, difficulty speaking, and visual disturbances [5]. The unruptured aneurysm is also likely to cause internal bleeding [6]. The risk of this disease developing and rupturing varies from individuals [7]. However, high blood pressure and smoking are the major risk factors for the development of this disease [8]. Some types of the aneurysm may require surgical treatment to prevent rupture [9]. Unruptured aneurysm patients recuperate after surgical procedures. The surgical procedure will only be done to the patient if it is life-threatening. There has been a significant increase in unruptured aneurysm detection due to the use of CT

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in clinical practice [10]. Deposits do trigger the action of the heart to pump even faster and harder than usual to pump the blood past the greasy buildup [11]. Approximately many patients live for many years with an aneurysm in the brain without knowing it [12].

Method

The study examines the health journals that look into the key elements or aspects of the aneurysm [13]. The various investigations that relate to the facts about the unruptured aneurysm to examine the prevalence and other issues of the condition such as vital signs and symptoms, the prognosis, and the elements of the patient education [14].

Results

According to the review of the various health journals on the disease that were taken into consideration for the study, the unruptured aneurysm can be life-threatening and often dangerous if not detected during tests in good time [15]. According to research, the occurrence in the full-grown population is amid 1% and 5%; though, 50-80% of all aneurysm do not rupture in the patients lifetime [16]. An unruptured aneurysm is shared in females than males with a proportion of 3:1 [17]. Although the actual cause of this condition is yet to be established, particular factors and conditions are essential in the disease's higher prevalence [18]. For instance, tissue damages in significant arteries do play a crucial role in the disease [19]. The arteries can, in this way, be harmed by the blockage of deposits of the fatty acids [20]. This stress can, in some cases, damage the arteries as a result of the higher pressure that is created [21].

Pathophysiology

Their location in the body classifies an aneurysm, the brain, and heart arteries are the common sites of a severe aneurysm [22]. The bulge is likely to take two main shapes, the swelling on both sides of the blood vessels commonly referred to as fusiform aneurysm and the saccular aneurysm that bulges only on one side [23]. The characteristic finding is the decrease in the tunica media, the artery's middle muscular layer that causes structural defects. These defects, together with the hemodynamic factors, can lead to an aneurysm [24]. The condition is often accompanied by sudden and severe headaches and or other symptoms that are possibly related to a ruptured kind of aneurysms. The impact of intracranial bleeding puts the patients at risk of stroke [25].

Genetics

The genetic influence for this disease among patients with at least a single pretentious family member has around 4% threat of having the unruptured aneurysm. In contrast, patients with two or more pretentious first-degree household associates have 8%-10% risk of having the disease [26]. However, it does not occur among patients below 50 years [27]. It was also noted that roughly 5% to 15% of cases of trauma is linked to the un-ruptured aneurysm [28].

Radiology

A Computerized Tomography (CT) scan is typically the primary examination to detect the bleeding in the brain, and a cerebrospinal fluid test can also detect bleeding [29]. The present strategies endorse showing with the intracranial attractive timbre imaging for persons having direct families suffering from the disease [30].

Clinical implication

Unanswered questions may have incidental findings due to complaints that are not related to the disease or detection as they grow and compress the adjacent structures in the brain. These compressions may cause visual field defects, hemiparesis, or seizure [31]. However, other cranial nerves may be involved; this includes the trochlear and the abducent nerves. The real cause of the aneurysm is not known, but a range of factors may increase one's risk of getting affected.

Scientific analysis

The two articles which were considered for the study were Scientific World Journal and Medical News Today. The first article was the most appropriate since it was more detailed and properly organized. The essential elements of the unruptured aneurysm in the report were well stipulated, and this made it simple to comprehend. The second article was equally important. However, it did not dig deeply into the critical elements of the disease as the first article [32].

Unanswered question

The unanswered question is about the prevalence rate of the disease among women and men and the genetic inheritance of the disease among the family members. However, most scientific studies are still aiming at how the rupture risk is affected by location, size, and age younger than 50 years. The other unanswered question is the prevalence rate based on gender. Most scientific studies on the same subject have not been able to explain why the disease has a considerably higher prevalence in women compared to men.

Conclusion

An unruptured aneurysm is a condition that is common among people above the ages of 50 years, mostly adults. An unruptured aneurysm is being detected at a higher rate because of the increased use of the imaging services [33]. The unruptured aneurysm is asymptomatic, mainly if it is small. There is limited historical data that is available for patients with an unruptured aneurysm; however, understanding the natural history of the aneurysm is considered necessary in making decisions in the treatment of the disease.

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