

# Embosphere

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Embosphere [Microspheres](#) are the most clinically studied and clinically proven round embolic, providing consistent and predictable results for effective [embolization](#).

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## Case series

A study aimed to evaluate the efficacy of tumor embolization using [Embosphere®](#) microspheres for skull base meningiomas and analyze post-embolization plain computed tomography (CT) and magnetic resonance imaging (MRI) scans to identify findings that could potentially predict treatment response.

**Methods:** Between April 2014 and April 2020, 80 patients with skull base meningiomas presenting at our medical center underwent embolization with Embosphere® microspheres. The effects of tumor embolization were evaluated through a comparison of post-embolization plain CT and contrast-enhanced MRI.

**Results:** A total of 143 vessels (102/108 external carotid artery branches; 41/65 internal carotid artery branches) from 80 skull base meningiomas were embolized with Embosphere® microspheres. Microspheres 100-300 µm in size were used in two cases, microspheres 300-500 µm in size were used in 12 cases, and microspheres 500-700 µm in size were used in 66 cases. Post-embolization contrast-enhanced MRI showed reductions in enhancing lesions within the tumor in 55/80 cases. Post-embolization plain CT scans showed high-density lesions within the tumor in 41/55 cases. Thus, reductions in enhancing lesions on post-embolization contrast-enhanced MRI were statistically significantly associated with the presence of high-density lesions on post-embolization plain CT ( $P < 0.001$ ). Embolization-related neurological complications occurred in three cases.

**Conclusions:** Embosphere® microspheres are user-friendly and effective [embolization agents](#) for skull base meningiomas. Post-embolization contrast-enhanced MRI and plain CT findings may be useful for evaluating the effects of tumor embolization <sup>1)</sup>.

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Seventeen consecutive patients (average age, 76.4 years; 12 men [71%]) underwent MMA embolization of CSDH from January 2014 to July 2017. Earlier interventions included embolization using N-butyl-2-cyanoacrylate (although trisacryl gelatin microspheres were used in recent cases), followed by burr-hole craniotomy and irrigation in all cases. None of the patients experienced perioperative complications or postoperative recurrence. The modified Rankin Scale scores, which were unfavorable at admission, improved significantly at discharge but were comparable to those at the time of hospitalization when measured during the follow-up period. Although the patients required rehospitalization at other departments for unrelated causes, none required rehospitalization in our department.

**Conclusions:** Despite the known unfavorable outcomes of patients with intractable CSDHs, MMA

embolization was not associated with recurrent CSDH or rehospitalization in our department in the current case series. MMA embolization should be considered a preferred therapeutic option for intractable CSDHs <sup>2)</sup>.

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<sup>1)</sup>

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<sup>2)</sup>

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