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Early Pharmacovigilance Reports for Apitegromab in Spinal Muscular Atrophy Using VigiAccess Data

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Short Report

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Abstract

Introduction/Aims:

Apitegromab is a muscle-directed, myostatin-inhibiting monoclonal antibody approved in the United States in September 2026 as add-on therapy for spinal muscular atrophy (SMA). We characterized an early snapshot of publicly available pharmacovigilance reports associated with Apitegromab.

Methods

VigiAccess, the World Health Organization's public interface to VigiBase, was queried for Apitegromab on September 16, 2026 (data set date September 13, 2026). Aggregate report counts were transcribed by MedDRA System Organ Class (SOC), preferred term, age group, sex, region, and reporting year. No inferential or disproportionality analysis was performed.

Results

VigiAccess listed 8 reports. The highest displayed SOC counts were musculoskeletal and connective tissue disorders (n = 4; scoliosis [n = 4]) and injury, poisoning and procedural complications (n = 3). Five SOCs had counts of 2 and eight had counts of 1. Reports involved patients aged 2–17 years and dated from 2021, 2022, and 2026.

Discussion

These sparse, denominator-free aggregate data cannot establish incidence, disproportionality, or causality. Report-level provenance is unavailable, and some reports preceded FDA approval; therefore, the dataset should not be interpreted as an established postmarketing safety profile. Continued surveillance is appropriate as real-world exposure increases.

Introduction and Aims

Apitegromab-mstn (Isembyld; Scholar Rock) is a full human monoclonal antibody that inhibits activation of myostatin, thereby targeting the muscle component of spinal muscular atrophy (SMA). The US Food and Drug Administration (FDA) approved apitegromab-mstn on September 11, 2026, for adults and children 2 years of age and older with SMA who are receiving an SMN2-targeted treatment. It is the first approved SMA therapy that directly targets muscle loss [1, 2].

Approval was supported by SAPPHIRE (NCT05156320), a 52-week, randomized, double-blind, placebo-controlled phase 3 trial that enrolled 188 non-ambulatory participants aged 2–21 years with SMA type 2 or 3 who were receiving nusinersen or risdiplam [1, 3]. Because commercial exposure was only

beginning when approval was announced, we aimed to describe the earliest aggregate pharmacovigilance reports associated with Apitegromab in VigiAccess and to define the limitations of their interpretation.

Methods

VigiAccess is the publicly accessible interface to VigiBase, the World Health Organization global database of individual case safety reports maintained by the Uppsala Monitoring Centre. It provides aggregate, grouped results rather than case narratives or patient-level records [4].

We searched VigiAccess for the active ingredient apitegromab on September 16, 2026. The displayed data set date was September 13, 2026. We transcribed the total number of reports and the displayed counts by Medical Dictionary for Regulatory Activities (MedDRA) System Organ Class (SOC), preferred term, age group, sex, geographic region, and reporting year. Because a single report may contain multiple events and may contribute to more than one SOC or preferred term, category counts were treated as nonmutually exclusive. Percentages displayed by VigiAccess were not analyzed because they do not represent incidence and cannot be interpreted using an exposure denominator [4].

Given the small number of reports and the absence of exposure, comparator, temporal, seriousness, outcome, and case-level clinical data, no incidence calculation, disproportionality analysis, statistical comparison, or causal assessment was performed. Results are presented descriptively. Ethics committee approval and informed consent were not required because the study used only publicly accessible, aggregate, de-identified data and did not involve participant contact or access to individual-level records.

Results

VigiAccess listed 8 reports associated with apitegromab. The largest displayed SOC count was musculoskeletal and connective tissue disorders (n = 4), represented by scoliosis (n = 4). Injury, poisoning and procedural complications had a displayed count of 3 and included procedural pain (n = 2), anaemia postoperative, joint dislocation, and post lumbar puncture syndrome (n = 1 each).

Five SOCs had displayed counts of 2: cardiac disorders (tachycardia [n = 2]); gastrointestinal disorders (abdominal distension, abdominal pain, aphthous ulcer, constipation, and nausea [n = 1 each]); infections and infestations (pneumonia [n = 2], gastroenteritis viral and sinusitis bacterial [n = 1 each]); metabolism and nutrition disorders (hypoalbuminaemia, hypoglycaemia, and metabolic acidosis [n = 1 each]); and vascular disorders (hypertension and hypotension [n = 1 each]). Eight additional SOCs had displayed counts of 1 (Table 1).

Table 1
VigiAccess displayed counts of reported adverse events associated with apitegromab by MedDRA System Organ Class (8 total reports; data set date September 13, 2026)

System Organ Class	SOC count, n	Preferred terms (n)
Musculoskeletal and connective tissue disorders	4	Scoliosis (4)
Injury, poisoning and procedural complications	3	Procedural pain (2); anaemia postoperative (1); joint dislocation (1); post lumbar puncture syndrome (1)
Cardiac disorders	2	Tachycardia (2)
Gastrointestinal disorders	2	Abdominal distension, abdominal pain, aphthous ulcer, constipation, and nausea (1 each)
Infections and infestations	2	Pneumonia (2); gastroenteritis viral and sinusitis bacterial (1 each)
Metabolism and nutrition disorders	2	Hypoalbuminaemia, hypoglycaemia, and metabolic acidosis (1 each)
Vascular disorders	2	Hypertension and hypotension (1 each)
Blood and lymphatic system disorders	1	Anaemia (1)
Congenital, familial and genetic disorders	1	Developmental hip dysplasia (1)
General disorders and administration site conditions	1	Pyrexia (1)
Nervous system disorders	1	Intracranial hypotension (1)
Psychiatric disorders	1	Anxiety (1)
Renal and urinary disorders	1	Urinary retention (1)
Respiratory, thoracic and mediastinal disorders	1	Hypoxia (1)
Skin and subcutaneous tissue disorders	1	Dermatitis (1)

Abbreviations: MedDRA, Medical Dictionary for Regulatory Activities; SOC, System Organ Class. Note: VigiAccess listed 8 total reports. One report may include multiple SOCs and multiple preferred terms; counts are therefore nonmutually exclusive and must not be summed to estimate the number of patients. Percentages displayed by VigiAccess were omitted because they do not represent incidence and no exposure denominator is available. Source: VigiAccess, Uppsala Monitoring Centre.

The displayed age groups were 2–11 and 12–17 years. Reports originated from the Americas and Europe and included both sexes. Reporting years were 2021, 2022, and 2026. The public interface did

not provide case-level information that could establish report source, clinical context, timing in relation to treatment, seriousness, outcome, duplicate status, or causality.

Discussion

This analysis describes an extremely early and sparse VigiAccess snapshot. The 8 reports cannot support incidence estimation, disproportionality analysis, or causal attribution. SOC and preferred-term counts are nonmutually exclusive, and the absence of an exposure denominator prevents estimation of event frequency among treated patients. Uppsala Monitoring Centre cautions that VigiAccess data provide a starting point for understanding reported events but cannot confirm a relationship between an event and a medicine [4].

The reporting years included 2021 and 2022, before FDA approval, and the 2026 data cut occurred only 2 days after approval. The aggregate interface does not identify whether reports arose from clinical trials, expanded access, spontaneous reporting, or another source. Accordingly, these data should not be characterized as an established postmarketing safety profile. Reported events may reflect SMA, clinical procedures, concomitant therapies, or other factors that cannot be evaluated without case-level information.

The approved prescribing information identifies fractures as an important risk and lists upper respiratory tract infections, vomiting, cough, other viral infections, headache, gastroenteritis, pharyngitis, and hypersensitivity among common adverse reactions [2]. The present VigiAccess counts neither confirm nor refute those findings. Future analyses should be undertaken after substantially greater commercial exposure and should incorporate case-level clinical review and an appropriate comparator or disproportionality method when sufficient data are available.

In conclusion, VigiAccess contained 8 early reports associated with apitegromab as of September 13, 2026. The dataset documents the presence of reported events but does not establish a safety signal or drug-event causality. Continued pharmacovigilance is warranted as real-world use expands.

Abbreviations

FDA, US Food and Drug Administration; ICSR, individual case safety report; MedDRA, Medical Dictionary for Regulatory Activities; SMA, spinal muscular atrophy; SMN, survival motor neuron; SOC, System Organ Class; WHO, World Health Organization.

Declarations

Presentation

This material has not been presented at a meeting.

Competing Interests:

The authors have no relevant financial or non-financial interests to disclose.

Ethics Approval:

This study did not require ethics committee approval because it used only publicly accessible, aggregate, de-identified pharmacovigilance data (VigiAccess) and did not involve participant contact or access to individual-level records.

Consent to Participate:

Not applicable. No individual human participants were recruited or contacted; only publicly available, aggregate, de-identified data were used.

Consent to Publish:

Not applicable. No identifiable individual-level data or images are included in this manuscript.

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Author Contributions:

A.A.K.: Conceptualization, data curation, formal analysis, investigation, methodology, literature review, writing – original draft, and writing – review and editing. S.A.: Supervision, validation, and writing – review and editing. Both authors approved the final manuscript.

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Data Availability:

The source data are publicly available through VigiAccess (https://www.vigiaccess.org). All data extracted for this analysis are reported in the manuscript and Table 1; no additional dataset was

generated.

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