

Dear Editor,

Thank you for your comments and valuable suggestions concerning our revised manuscript entitled "A new case report of perianal superficial CD34-positive fibroblastic tumor" (Manuscript ID: 63621). We have revised our manuscript according to these suggestions, and all responses are listed point-by-point below.

Reviewer #1:

Scientific Quality: Grade C (Good)

Language Quality: Grade A (Priority publishing)

Conclusion: Accept (General priority)

Specific Comments to Authors: The authors reported on a new case of primary superficial CD34 positive fibroblastic tumor. The tumor is rare and the localization unique: thus the case deserves publication. The clinical description of the case is complete and the histological characterization adequate.

[Answer: Thank you very much for your comments.](#)

Reviewer #2:

Scientific Quality: Grade C (Good)

Language Quality: Grade A (Priority publishing)

Conclusion: Major revision

Specific Comments to Authors: This paper is a case report regarding the perianal superficial CD34-positive fibroblastic tumor (SCPFT). As in a review paper with 41 patients (Int J Clin Exp Pathol 2020;13:38-43), some rare SCPFTs including the diseases developed in the groin and the vulva, were reported. However, this perianal SCPFT is the first case. I would like to provide some comments to be addressed. Comments: 1) A case report can provide the physicians with the information of the rare disease. Thus, detailed clinical backgrounds should be kindly shown to the readers. I would recommend the authors to generate a table to summarize the clinical data. In particular, the data

regarding the inflammation (white blood cells, percentage of neutrophils, C-reactive protein, etc)

Answer: Thank you very much for your suggestion. We added details of inflammatory factors and tumor biomarkers listed in Table 1, and B ultrasound image of the tumor was added as Figure 1 in the revised manuscript. Please see the Table 1 and Figure 1 as below.

Table 1 Inflammatory factors and tumor biomarkers of this patient.

inflammatory factors		tumor biomarks	
white blood cell count	7.55*10 ⁹ /L	AFP	4.08 ng/ml
neutrophil count	4.28*10 ⁹ /L	CA19-9	11.51 U/ml
neutrophil percentage	56.6%	CA125	7.6 U/ml
high-sensitivity c-reactive protein	0.46 mg/L	CEA	1.97 ng/ml



Figure 1 The B ultrasound image. A perianal cystic mass, consider perianal

abscess was observed.

2) In relation to my comment No.1, this case was misdiagnosed as having the perianal abscess. The authors should mention essential clinical features (fever, anal pain, redness around the tumor, etc).

Answer: Thank you for your suggestion. Although our patient had no fever before surgery, a small red mass, and no fever or pain, routine blood examination was normal. It was misdiagnosed as a perianal abscess due to the unusual disease location combined with B ultrasound results. We added this information to the discussion section Page 8 line 5 to line 8 and highlighted it in yellow.

According to the requirements of your magazine, we could like to change the title to '**Perianal superficial CD34-positive fibroblastic tumor: a new case report**' and highlighted it in yellow in the revised manuscript.

Core tip: We present a case of a perianal superficial CD34-positive fibroblast tumor. Surgery is the main treatment for superficial painless slowly growing masses. Postoperative immunohistochemical examination showed that strong positive CD34 and good prognosis were the characteristics of the case. We added this information on page 5, line 22 to line 25 in the revised manuscript and highlighted it in yellow.

Once again, thank you for your comments and valuable suggestion.

Best regards,

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Manuscript NO: 63621

Manuscript Type: CASE REPORT

Perianal superficial CD34-positive fibroblastic tumor: a new case report

Perianal SCFPT

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Author contributions: Chen-yan Long collected the data of the case and drafted the manuscript; Tao-li Wang reviewed the manuscript and provided constructive input; both authors read and approved the final manuscript.

The authors received no funding for this work.

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Abstract

BACKGROUND

Superficial CD34-positive fibroblast tumors (SCPFTs) are newly recognized fibroblast and myofibroblast tumors representing intermediate tumors. To the

best of our knowledge, fewer than 50 cases have been reported. Perianal SCPFT has not been previously reported.

CASE SUMMARY

A 55-year-old man was hospitalized upon discovering a painless perianal lump 10 days prior. Physical examination showed a lump of approximately 3 cm*4 cm in the 7 to 8 o'clock direction in the perianal area. Perianal abscess was considered the primary diagnosis. Lump removal surgery was performed under epidural anesthesia. Postoperative pathology showed a well-circumscribed, soft tissue-derived, spindle-cell tumor with strong CD34 positivity by immunohistochemistry. The final diagnosis was perianal SCPFT. There were no complications, and the patient was followed up for more than 8 months without recurrence or metastasis.

CONCLUSION

We report a case of a perianal superficial CD34-positive fibroblast tumor. This rare mesenchymal neoplasm has distinctive histomorphology, which is important for diagnosis. Comprehensive consideration of clinical information, imaging, histology and immunohistochemistry is important for diagnosis.

Key words: *Superficiality*; CD34-positive; Fibroblast tumor; Perianal; Diagnosis; Case report

Core tip: We present a new case of a perianal superficial CD34-positive fibroblast tumor. Surgery is the main treatment for superficial painless slowly growing masses. Postoperative immunohistochemical examination showed that strong positive CD34 and good prognosis were the characteristics of the case.

INTRODUCTION

Superficial CD34-positive fibroblast tumors (SCPFTs) are newly recognized

fibroblast and myofibroblast tumors representing intermediate tumors. SCPFT was first reported in 2014^[1]. To date, less than 50 cases have been reported. Perianal SCPFT has not been previously reported^[2]. Here, we report a case that was misdiagnosed as a perianal abscess before surgery. Informed consent for the publication of these data was obtained from the patient.

CASE PRESENTATION

Chief complaints

A 55-year-old man was hospitalized after he discovered a painless perianal mass.

History of present illness

The patient's symptoms started 10 days prior to presentation.

History of past illness

The patient had no relevant previous medical history.

Personal and family history

The patient's family history was unremarkable.

Physical examination

A lump approximately 3 cm*4 cm could be felt in the 7 to 8 o'clock direction of the perianal area.

Laboratory examinations

After admission to the inpatient ward, laboratory examinations were carried out that included routine blood tests (Table 1), routine tests for stool plus

occult blood, and tests for liver and kidney function, electrolytes, blood coagulation function, and tumor biomarkers. Preoperative examinations ruled out hepatitis B, hepatitis C, syphilis, and human immunodeficiency virus. All results were within normal ranges.

Postoperative pathology results: A lump approximately 8 cm*6.5 cm*5 cm with a clear boundary, regional capsule, surface color of gray or taupe, interior color of gray, likely nodules, and mucoid changes in some areas was observed (Figures 2-4).

Immunohistochemistry showed that CD34 (diffuse strongly +), vimentin (diffuse strongly +), Ki-67 (<1%) and CD31, S100, desmin, EMA, SMA, CD117, Dog-1, CK-P, INI1, CD68, CD99, STAT6, β -catenin, HMB45, and ALK (D5F3) were all negative (Figures 5A and B).

Imaging examinations

B-ultrasound showed a 7.9 cm*7.6 cm cystic mass in the 1 to 5 o'clock direction in the knee-chest position. The border was clear with poor entrant sound and rear echo enhancement. Many vascular signals could be detected around the mass. (Figure 1)

FINAL DIAGNOSIS

SCPFT.

TREATMENT

Lump removal surgery was performed under epidural anesthesia.

OUTCOME AND FOLLOW-UP

There were no complications, and the patient was followed up for more than 8 months without recurrence or metastasis.

DISCUSSION

Superficial CD34-positive fibroblastic tumors (SCPFTs) are mostly slow-growing, painless lumps, occurring in patients with a median age of 35 years (age range 20-76 years) with a slight male preponderance^[3-8]. It most commonly occurs in the lower limb, thigh, buttock, shoulder, and upper arm. The location in the perianal region was not previously reported. Although our patient had no fever before surgery and a small red mass and no fever or pain, routine blood examination was normal. It was misdiagnosed as a perianal abscess due to the unusual disease location combined with B ultrasound results. Perianal abscess often manifests as an inflammatory mass with obvious pain. The total number of leukocytes and proportion of neutrophils can be increased on routine blood examinations. CD34 negativity on immunohistochemistry is the most important discriminatory factor.

Histologically, SCPFT can vary and has many forms without unique histological morphological characteristics, and the disease can be easily misdiagnosed as other mesenchymal tumors. The features of SCPFT include the following: (1) it is a slow-growing, painless lump; (2) the tumor is confined to the deep dermis or superficial fibroadipose tissue; (3) tumor cells are composed of plump spindle to epithelioid cells^[9]; and (4) CD34 is strongly positive on immunohistochemistry, with partial cellular expression of keratin, no INI1 expression, and a low Ki67 proliferative index^[10].

To date, surgical resection has been used to treat SCPFT. Only one patient had lymph node metastasis after the operation^[3]. No recurrence or metastasis was reported.

CONCLUSION

This is the first reported case of perianal SCPFT. Due to the novelty of this tumor, the long-term prognosis is not clear. Therefore, it is necessary to

accumulate more cases and conduct long-term follow-up.

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Footnotes

Informed consent statement: Informed written consent was obtained from the patient for publication of this report and any accompanying images.

Conflict-of-interest statement: The authors declare that they have no conflict of interest.

CARE Checklist (2016) statement: The authors have read the CARE Checklist(2016), and the manuscript was prepared and revised according to the CARE Checklist (2016).

Figure Legends



Figure 1 The B ultrasound image. A perianal cystic mass, consider perianal abscess was observed.



Figure 2 Postoperative gross pathology. A subcutaneous tumor approximately 8 cm in diameter was observed in the perianal area.

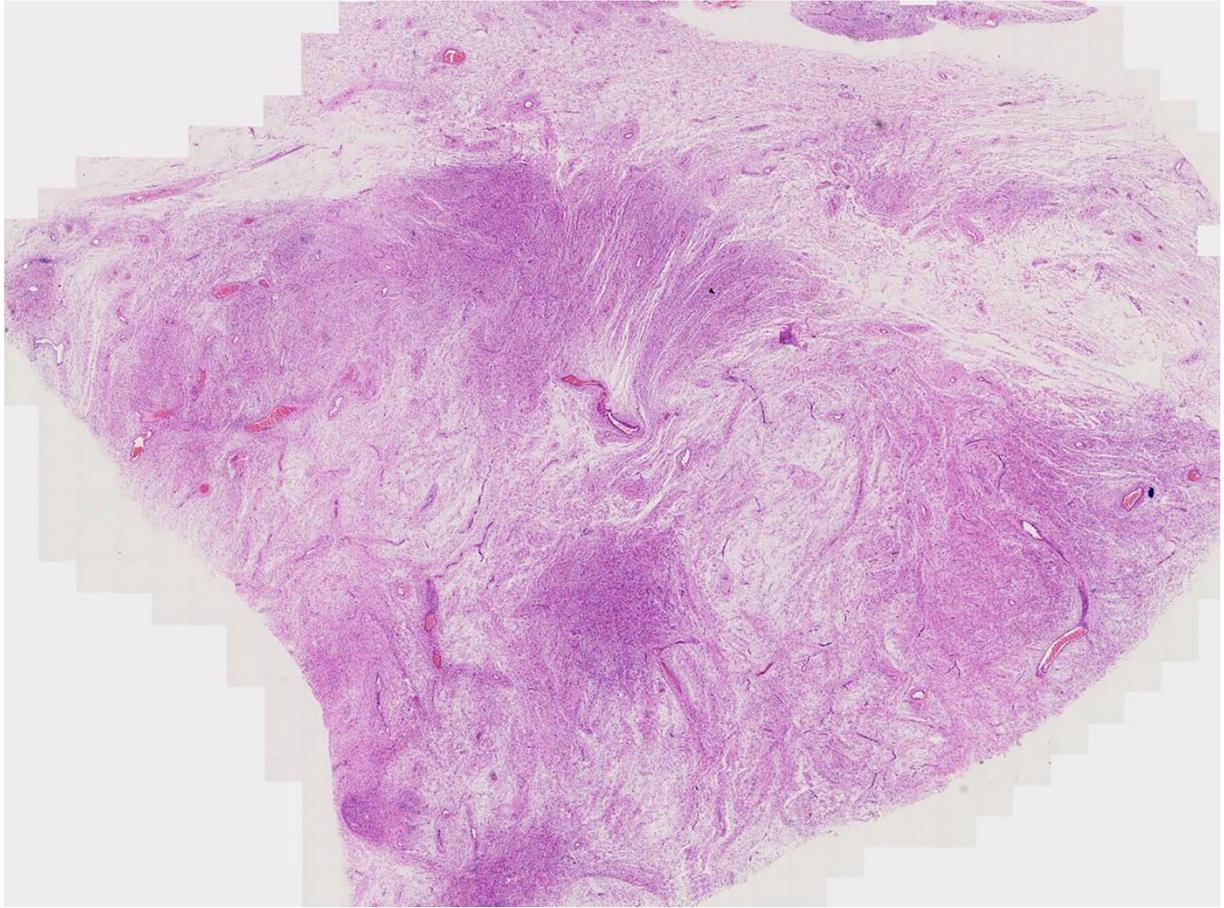


Figure 3 Histopathological examination by hematoxylin-eosin staining (0.45×). A tumor with a clear boundary was located in the upper dermis.

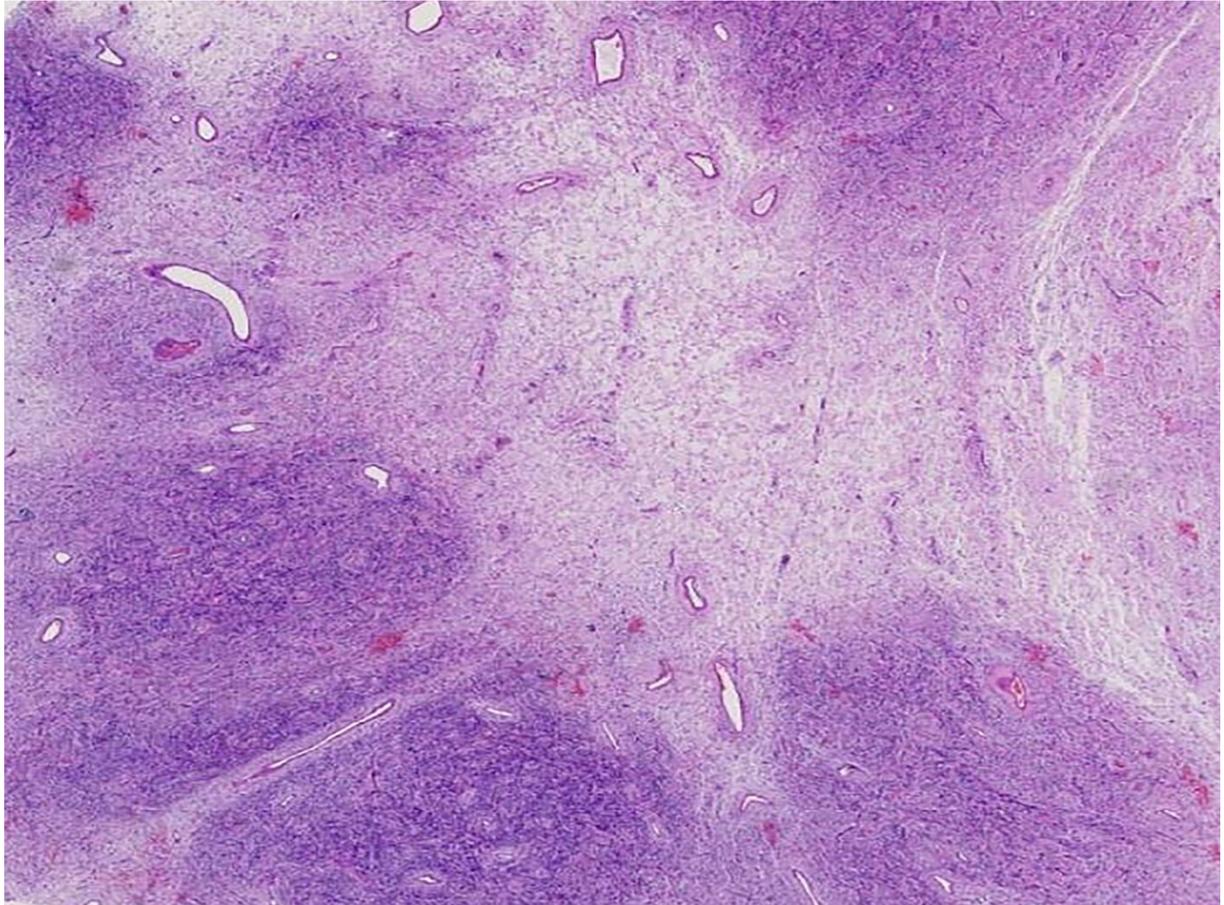


Figure 4 Histopathological examination by hematoxylin-eosin staining (20×).

The tumor cells grew as mixed nodules in dense areas and sparse areas.

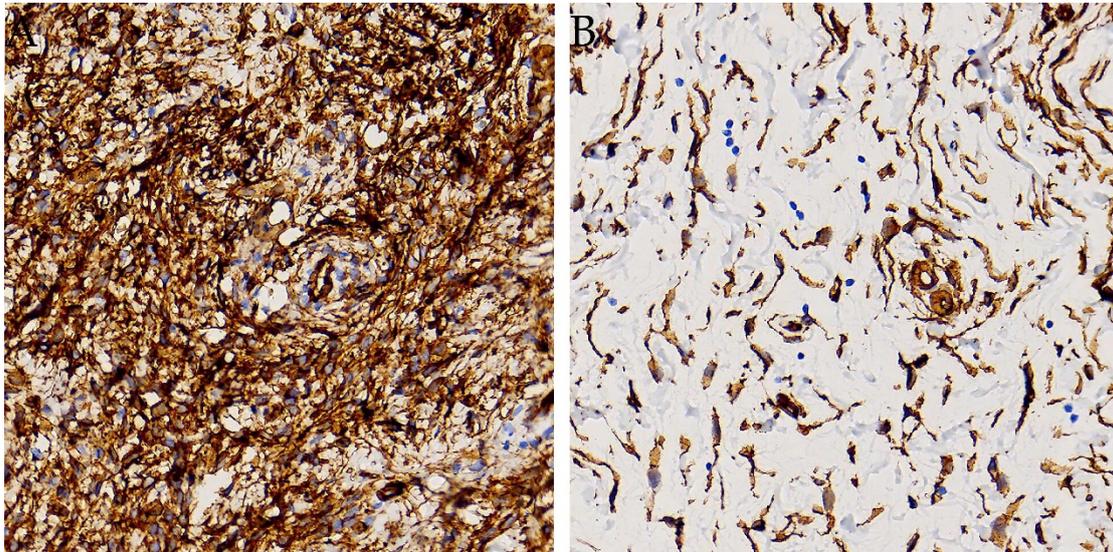


Figure 5 Immunohistochemical examination by the EnVision method (400×).

A: Diffuse and strong expression of CD34 in the dense area; B: The expression of CD34 was positive in the sparse area.

Table 1 Inflammatory factors and tumor biomarkers of this patient.

inflammatory factors		tumor biomarks	
white blood cell count	7.55*10 ⁹ /L	AFP	4.08 ng/ml
neutrophil count	4.28*10 ⁹ /L	CA19-9	11.51 U/ml
neutrophil percentage	56.6%	CA125	7.6 U/ml
high-sensitivity c-reactive protein	0.46 mg/L	CEA	1.97 ng/ml