

Supplementary File

Author, year	Study Type	Country	Sample Size	Age	Gender (M/F)	Cannabis user (Yes/No)
1. A Espino Garcia-2016 ³⁰	Case Report	Spain	1	27	M	yes
2. Jaison John-2019 ³¹	Case Report	USA	1	41	M	yes
3. Sami Ghazaleh-2019 ³²	Case Report	USA	1	48	F	yes
4. D Pagliari-2019 ³³	Case Report	Italy	1	25	M	yes
5. Mehran Howaizi-2012 ²⁵	Case Report	France	1	30	F	yes
6. Houissa Fatma-2013 ³⁴	Case Report	Tunisia	1	22	M	yes
7. Rohit Singh-2020 ³⁵	Case Report	USA	1	31	M	yes
8. Morgan Sly-2021 ³⁶	Case Report	USA	1	20	M	yes
9. Behzad Hajimoradi-2021 ³⁷	Case Report	Iran	1	25	M	yes
10. Fiona Lubega-2021 ³⁸	Case Report	USA	1	28	M	yes
11. Joel Chandy-2019 ³⁹	Case Report	USA	1	20	F	YES
12. Olivier Belze Jr-2011 ⁴⁰	Case Report	France	1	17	M	yes
13. Paul Grant 2003 ¹¹	Case Report	United Kingdom	1	29	M	Yes

14. Kurt A Wargo 2007 ⁴¹	Case Series	USA	3	22,23,20	Male=2, Female= 1	Yes
15. Adrian Culetto, 2017 ⁴²	Case Series	FRANCE	18	18,18,20, 22,24,25, 25,28,29, 30,31,33, 33,39,43, 47,52,60	5F 13M	yes :18
16.Mehmet Husamettin Akkucuk, 2014 ⁴³	Case Report	Turkey	1	44	M	YES
17. Ivana Mikolašević, 2013 ⁴⁴	Case Series	Croatia	2	38,22	M:2	YES: 2
18. AgnèsLorvellec 2015 ⁴⁵	Case Report	FRANCE	1	33	M	Yes
19. Yusuf Kayar 2014 ⁴⁶	Case Report	Turkey	1	28	M	Yes
20. Bournet et al 2008 ⁴⁷	Case report	France	1	16	M	Yes
21. Satish K Nayak 2015 ⁴⁸	Case report	India	1	21	M	Yes
22. Gino et al 2015 ⁴⁹	Abstract	Italy	1	26	M	Yes
23. Zayouna et al 2012 ⁵⁰	Abstract	USA	1	33	M	Yes
24. Jalal et al 2013 ⁵¹	Abstract	USA	1	26	M	Yes
25. Song et al 2022 ⁵²	Case Report	USA	1	64	F	Yes

Table 1: Study type, demographic, sample, and patient characteristics of the included studies

Authors	Comorbidity	All Symptom	Risk factors	Revised Atlanta classification	Naranjo score
1. A Espino Garcia-2016 ³⁰	NO	epigastric abdominal pain, nausea, vomiting	Smoker, alcohol consumption, Cannabis user	2/3	NR
2. Jaison John-2019 ³¹	NR	constant left-sided abdominal pain	25-year cannabis usage	2/3	5
3. Sami Ghazaleh-2019 ³²	type 2 diabetes mellitus, essential hypertension, hyperlipidemia, and gastroesophageal reflux disease	epigastric pain, nausea and vomiting.	Daily heavy marijuana - three years	2/3	NR
4. D Pagliari-2019 ³³	NR	epigastric pain and nausea	Cannabis user	3/3	6
5. Mehran Howaizi-2012 ²⁵	NR	severe upper abdominal pain, nausea	Cannabis user, 14 years	2/3	NR
6. Houissa Fatma-2013 ³⁴	no	epigastric abdominal pain, nausea and vomiting	Smoker, cannabis user	2/3	probable(between 5-8)
7. Rohit Singh-2020 ³⁵	no	epigastric pain radiating to back	Heavy cannabis user	3/3	NR
8. Morgan Sly-2021 ³⁶	no	nausea, vomiting, and epigastric pain	Cannabis user	3/3	NR
9. Behzad Hajimoradi-2021 ³⁷	no	epigastric and left upper quadrant pain,nausea,vomiting	Alcohol, smoking, marijuana user	3/3	NR
10. Fiona Lubega-2021 ³⁸	diverticulitis and migraines	severe lower abdominal pain , nausea,vomiting	Cannabis user	2/3	6

11. Joel Chandy-2019 39	no	epigastric pain ,nausea and vomiting	Cannabis user-14 months	2/3	NR
12. Olivier Belze Jr-2011 40	no	epigastric pain, vomiting, generalised tonic clonic seizures	smoker, cannabis user	2/3	NR
13. Paul Grant 2003 11	NR	Abdominal pain radiating Back, nausea,vomiting	Cannabis user, No alcohol, No Chronic Drug	NR	NR
14. Kurt A Wargo 2007 41	P2: Multiple Pancreatitis with Laparocholecystectomy, P1, P3: No	P1: upper abdominal pain, nausea, P2 Upper Abdominal pain, P3: Abdominal pain, Nausea, Vomiting, Diarrhea	Cannabis user and Smoking:3	NR	Secondary Pancreatitis to THC:3
15. Adrian Culetto, 2017 42	NR	NR	Cannabis Using and Smoking:12	3/3: 4, 2/3:14	NR
16.Mehmet Husamettin Akkucuk, 2014 43	NR	Abdominal pain, nausea	Cannabis User	2/3	NR
17. Ivana Mikolašević, 2013 44	P1: Multiple history of Pancreatitis, P2: No history	P1: Abdominal pain, Nausea, Vomiting P2: Abdominal pain, Nausea	Cannabis user, No Smoking, Drinking and medication	3/3, 3/3	NR
18. Agnès Lorvellec 2015 45	NR	NR	Cannabis Usage	NR	NR
19. Yusuf Kayar 2014 46	NO	nausea, severe abdominal pain radiating to the back	Cannabis usage and Smoking	3/3	8
20. Bournet et al 2008 47	NR	NR	Cannabis Usage	NR	8
21. Satish K Nayak 2015 48	NR	NR	Cannabis Usage	3/3	9

22. Gino et al 2015 ⁴⁹	NR	NR	Cannabis Usage	NR	6
23. Zayouna et al 2012 ⁵⁰	NR	NR	Cannabis Usage	NR	8
24. Jalal et al 2013 ⁵¹	NR	NR	Cannabis usage	NR	8
25. Song et al. 2022 ⁵²	pre-diabetes, tobacco use disorder, cannabis use disorder	abdominal pain, nausea, vomiting	Cannabis user, no alcohol use	3/3	NR

Supplementary Table 2: Comorbidity, risk factors, symptoms, and diagnostic criteria for included studies

Author, year	S.Amylase	S.lipase	Wbc count	Creatinine	Alkaline Phosphatase (ALP)	Aspartate Aminotransferase (AST)	Alanine Aminotransferase (ALT)	Total Bilirubin	Glucose
1. A Espino Garcia-2016 ³⁰	247 U / L	75.3 U / L	normal	0.85 mg / dL	NR	16 U / L	12 U / L	NR	116 mg / dL
2. Jaison John-2019 [30] ³¹	NR	36 units/ L	20,300 /mm ³	0.9 mg/dL	94 units/L	17 units/L	23 units/L	1.0 mg/dL	123 mg/d L
3. Sami Ghazaleh-2019 ³²	NR	725 U/L	NR	NR	WITHIN NORMAL LIMITS	53 U/L	47 U/L	WITHIN NORMAL LIMITS	270 mg/d L
4. D Pagliari-2019 ³³	601 IU/L	986 IU/L	normal	NR	NR	NR	normal	normal	NR
5. Mehran Howaizi-2012 ²⁵	NR	956 IU/L	normal	normal	normal	normal	normal	normal	NR
6. Houissa Fatma-2013 ³⁴	1870 IU/mL	1100 IU/mL	13,100 /mm ³	normal	normal	normal	normal	normal	NR
7. Rohit Singh-2020 ³⁵	NR	1345 U/L	NR	NR	NR	NR	NR	NR	NR
8. Morgan Sly-2021 ³⁶	NR	1541 IU/L	18.6 × 10 ⁹ /L	0.85mg/ dl	122 u/L	19 U/L	27 u/L	0.3 mg/dl	134 mg/dl
9. Behzad Hajimoradi-2021 ³⁷	1003 IU/L	853 IU/L	14x10 ⁹ /L	normal	normal	normal	normal	normal	normal
10. Fiona Lubega-2021 ³⁸	NR	1,022 U/L	14,700 /μL	normal	normal	normal	normal	normal	normal
11. Joel Chandy-2019 ³⁹	NR	1295 U/L	NR	NR	NR	27 u/l	56 u/l	NR	NR
12. Olivier Belze Jr-2011 ⁴⁰	NR	1211 UI/L	NR	NR	NR	NR	NR	NR	NR
13. Paul Grant 2003 ¹¹	2,905 IU/mL High	NR	17.2x10 ⁹ L-1 High	Normal	Normal	Normal	Normal	Normal	NR

14. Kurt A Wargo 2007 ⁴¹	199 U/L,532 U/L,NR	399 U/L,865 U/L,515 U/L	P1: 16,810 mm-3, P2:17,000 mm-3, P3: NR	NR,NR,NR	NR	NR	NR	NR	NR
15. Adrian Culetto, 2017 ⁴²	NR	NR	NR	NR	NR	NR	NR	NR	NR
16.Mehmet Husamettin Akkucuk, 2014 ⁴³	294 IU/L	935 U/L	12.800 / μ L	NR	NR	Normal	Normal	Normal	NR
17. Ivana Mikolašević , 2013 ⁴⁴	400, 800 U/L	150, 220 U/L	13,4;9.2 ($\times 10^9$ /L)	NR	NR	NR	NR	NR	NR
18. AgnèsLorve llec 2015 ⁴⁵	NR	NR	NR	NR	NR	NR	NR	NR	NR
19. Yusuf Kayar 2014 ⁴⁶	elevated	elevated	elevated	NR	NR	NR	NR	NR	NR
20. Bournet et al 2008 ⁴⁷	NR	NR	NR	NR	NR	NR	NR	NR	NR
21. Satish K Nayak 2015 ⁴⁸	elevated	elevated	NR	NR	NR	NR	NR	NR	NR
22. Gino et al 2015 ⁴⁹	NR	NR	NR	NR	NR	NR	NR	NR	NR
23. Zayouna et al 2012 ⁵⁰	NR	NR	NR	NR	NR	NR	NR	NR	NR
24. Jalal et al 2013 ⁵¹	NR	NR	NR	NR	NR	NR	NR	NR	NR
25. Song et al. 2020 ⁵²	NR	568 U/L	Normal	NR	NR	NR	NR	NR	NR

Table 3: Lab findings of pancreatitis patients

Author, year	USG	CT findings	MRI	Management	Duration of intake	Recurrence	Outcomes
1. A Espino Garcia-2016 ³⁰	NR	normal	normal	meperidine, metamizole, Gabapentin	NR	NR	recovered
2. Jaison John-2019 ³¹	normal	inflammation of the peripancreatic fat at the body and tail consistent with pancreatitis	NR	iv fluids, pain management	25 years	NR	recovered
3. Sami Ghazaleh-2019 ³²	normal	Normal	MRCP enlargement of the pancreatic duct, no choledocholithiasis	bowel rest, intravenous fluids, and morphine	3 years	NR	recovered

4. D Pagliari-2019 ³³	enlarged pancreas	diffusely edematous pancreas with peripancreatic fat stranding and fluid collection	magnetic resonance cholangiopancreatography-pancreatic pseudocyst about 15 cm of diameter	conservative- for the first 2 episodes, endoscopic ultrasound (EUS)-guided drainage of the pancreatic pseudocyst for 3rd episode	NR	yes, 3 recurrent episodes	recovered
5. Mehran Howaizi-2012 ²⁵	normal	normal	normal	analgesics, rehydration and transient fasting.	14 years	yes, 2 recurrent episodes	recovered
6. Houissa Fatma-2013 ³⁴	thin-walled alithiasic gallbladder, non-dilated extra- and intrahepatic	normal	normal	feeding tube and morphine	NR	no	recovered
	ducts;pancreas not be viewed because of paralytic ileus.						
7. Rohit Singh-2020 ³⁵	normal	inflammation and edema around the head of pancreas	NR	intravenous fluids and supportive care	10 years	no	recovered
8. Morgan Sly-2021 ³⁶	normal	distal necrotizing pancreatitis with adjacent	necrotizing pancreatitis with acute necrotic collection, no	iv fluids, metoclopramide, morphine, ondansetron	NR	no	recovered

		complex free fluid	cholelithiasis duct dilatation				
9. Behzad Hajimoradi-2021 ³⁷	no ductal dilation,pancreas not visualised because of overlying bowel gas	acute pancreatitis with edema of the pancreas, no biliary dilatation or obstruction	NR	for pancreatitis - nasogastric aspiration and iv fluids for MI - Aspiration thrombectomy , aspirin, clopidogrel, heparin, antibiotics	some years, last consumption 6 hours before symptoms	no	anterior mi, recovered 9 days after admission
10. Fiona Lubega-2021 ³⁸	normal	normal	NR	intravenous fluids, Ketorolac and morphine	NR	one previous episode of acute pancreatitis unrelated to cannabis use	recovered
11. Joel Chandy-2019 ³⁹	normal	NR	mild peripancreatic stranding at the head of the pancreas	NR	14 MONTHS	NR	NR
12. Olivier Belze Jr-2011 ⁴⁰	normal	acute pancreatitis with a hepatopancreatic necrosis and an	normal	enteral feeding	NR	no	recovered

		intraperitoneal effusion					
13. Paul Grant 2003 ¹¹	Normal	pancreatic necrosis in the tail of the pancreas	NR	Ceasing Using Caanabis	NR	4 episodes	recovered
14. Kurt A Wargo 2007 ⁴¹	P1: Mild Pancreatitis, P2: Negative, P3: Mild Pancreatitis	P2: Mild Pancreatitis with no biliary dilatation	NR,NR,NR	NR,NR,NR	NR	NR	Recovered: 3
15. Adrian Culetto, 2017 ⁴²	NR	NR	NR	NR	4,3,3,7,6,5,7,6,5,4,10,8,10,20,15,20,15,25	NR	Follow up:16
16.Mehmet Husamettin Akkucuk , 2014 ⁴³	NR	no abnormalities in the pancreas, no peripancreatic fluid (Balthazar grade A acute pancreatitis), no gall stones, no dilation in the biliary system. no penetration of the duodenal ulcer to the pancreas.	NR	NR	NR	NR	Recovered

17. Ivana Mikolašević, 2013 44	Normal:2	P1, P2: Mild Pancreatitis with no biliary dilatation	NR	P1: Avoid THC P2: Analgesics, sedatives, Avoid THC	3 years, NR	9,3	Recovered:2
18. Agnès Lorrivellec, 2015 45	NR	NR	NR	NR	2	3	NR
19. Yusuf Kayar, 2014 46	edematous pancreatitis	NR	Normal	No THC	3 months	1	Recovered
20. Bournet et al, 2008 47	NR	NR	NR	NR	NR	1	Recovered
21. Satish K Nayak, 2015 48	NR	Acute Pancreatitis	NR	NR	NR	3	Recovered
22. Gino et al, 2015 49	NR	NR	NR	NR	NR	NR	NR
23. Zayouna et al, 2012 50	NR	NR	NR	NR	NR	1	NR
24. Jalal et al, 2013 51	NR	NR	NR	NR	7 joints/day	NR	NR
Song et al, 2022 52	NO EVIDENCE OF GALLSTONES OR CHOLECYSTITIS, NORMAL LIVER AND KIDNEYS	CTAP WITH CONTRAST-MINIMAL FAT STRANDING ADJACENT TO MID DUODENUM AND HEAD OF	NR	IV fluids, famotidine, counseling for tobacco and cannabis cessation	NR	NR	Recovered

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Table 4: Imaging findings, management, and outcomes of pancreatitis patients