e-ISSN: 0976-822X, p-ISSN:2961-6042

Available online on http://www.ijcpr.com/

International Journal of Current Pharmaceutical Review and Research 2026; 18(2); 1779-1786

Original Research Article

Transjugular Intrahepatic Portosystemic Shunt Versus Conventional Treatment for Improvement in Portal Hypertension

Pankaj Goyal[1], Adnan Khan[2], Laxman Ahirwar[3]

[1,2]Assistant Professor, Department of Radiodiagnosis, Chirayu Medical College and Hospital, Bhopal, M.P., India

[3]Professor, Department of Radiodiagnosis, Chirayu Medical College and Hospital, Bhopal, M.P., India

Received: 24-12-2025 / Revised: 23-01-2026 / Accepted: 25-02-2026

Corresponding Author: Dr. Adnan Khan

Conflict of interest: Nil

Abstract:

Aim: The present paper evaluates transjugular intrahepatic portosystemic shunt (TIPS) in comparison with conventional treatment strategies for improvement in portal hypertension, with particular attention to hemodynamic efficacy, control of variceal bleeding, management of refractory ascites, prevention of recurrent decompensation, and treatment-related adverse events.

Materials and Methods: This paper is a narrative, evidence-based comparative review based on current practice guidance, consensus recommendations, and meta-analytic data concerning TIPS and conventional treatment for portal hypertension. Data were synthesized under clinically relevant themes: pathophysiological basis, indications, patient selection, procedural endpoints, conventional comparators, outcomes in variceal bleeding and refractory ascites, post-procedural complications, and practical interpretation for present-day management.

Result: The comparative evidence shows that TIPS provides stronger portal decompression than conventional therapy because it directly lowers portal pressure gradient, whereas conventional therapy generally modifies bleeding risk or fluid accumulation indirectly. In variceal bleeding, TIPS reduces recurrent variceal bleeding more effectively than endoscopic therapy, and early TIPS in selected high-risk patients improves one-year mortality while markedly lowering rebleeding risk. In refractory ascites, TIPS is superior to serial paracentesis for ascites control and reduces repeated paracentesis requirements, but this benefit is offset by a greater risk of hepatic encephalopathy and by inconsistent survival advantage across older meta-analyses.

Conclusion: TIPS is not simply an alternative to conventional treatment; it is a mechanistically distinct portal decompressive therapy with superior efficacy for selected complications of portal hypertension. Conventional treatment remains foundational for initial stabilization, first-line bleeding management, and broad clinical applicability, but TIPS is superior in reducing recurrent variceal bleeding and in controlling refractory ascites in appropriately selected patients.

Keywords: Portal hypertension; Transjugular intrahepatic portosystemic shunt; Variceal bleeding; Refractory ascites; Hepatic encephalopathy.

DOI: 10.25258/ijcpr.18.2.295

Introduction

Portal hypertension is defined as pathological elevation of portal venous pressure and is one of the most important hemodynamic abnormalities in chronic liver disease. In cirrhosis, rising intrahepatic vascular resistance and increased splanchnic blood flow together produce progressive portal pressure elevation, which then leads to the clinically significant manifestations of decompensation, especially ascites, gastroesophageal varices, variceal hemorrhage, and hepatic encephalopathy.

Management of portal hypertension relied on conventional treatment strategies. These include non-selective beta blockers for prevention of decompensation and variceal bleeding, endoscopic screening and band ligation for varices, vasoactive drugs and antibiotics during acute variceal hemorrhage, and repeated large-volume paracentesis with albumin in refractory ascites. Conventional treatment remains essential because it is widely available, less invasive than shunt creation, and applicable across a larger spectrum of patients.

Transjugular intrahepatic portosystemic shunt creates a tract between the portal vein and hepatic vein, usually maintained with a stent, thereby bypassing the high-resistance cirrhotic liver and reducing portal pressure more directly than medical or endoscopic treatment. Current recommendations emphasize measurement of portal pressure gradient

before and after TIPS and recognize a post-TIPS portal pressure gradient below 12 mmHg as a preferred hemodynamic target in patients undergoing TIPS for variceal bleeding.

A proper comparison between TIPS and conventional treatment must therefore be indication-specific rather than simplistic. Conventional care remains the standard first response in most patients with portal hypertensive complications, especially because many episodes of acute variceal bleeding are initially controlled with vasoactive therapy, antibiotics, restrictive transfusion, and endoscopic treatment. Similarly, conventional management remains the backbone of care in compensated disease, where TIPS has no primary prophylactic role according to Baveno VII.

This paper examines TIPS versus conventional treatment for improvement in portal hypertension through a structured review of current guidance and comparative clinical evidence. The discussion focuses on mechanism, indications, materials and method of evidence synthesis, tabulated observations, therapeutic results, statistical interpretation of reported comparative outcomes, and a clinically reasoned conclusion regarding the place of TIPS in contemporary portal hypertension management.[6,7,3,1]

Materials & Method

This study was designed as a narrative review and comparative academic paper rather than as a primary clinical trial. The objective was to evaluate the relative effectiveness of transjugular intrahepatic portosystemic shunt and conventional treatment modalities in improving portal hypertension and its major complications. The framework was structured to resemble a review-based academic dissertation, with sections on background, evidence gathering, synthesis, tabular observation, results, statistical interpretation, and conclusion.

Study Design: A literature-based comparison was performed using high-yield contemporary and foundational evidence sources relevant to portal hypertension. Particular emphasis was placed on consensus guidance, clinical practice recommendations, and meta-analyses The approach was intended to integrate mechanistic understanding with practical outcome data in a way suitable for academic paper writing.

Data Sources: The principal sources included the Baveno VII consensus document on portal hypertension, current AASLD-related guidance and educational materials regarding TIPS in variceal hemorrhage and published meta-analyses or systematic reviews examining TIPS versus endoscopic therapy or TIPS versus large-volume paracentesis. Additional supportive evidence was taken from cohort observations on post-TIPS reduction in paracentesis frequency and recent literature on post-TIPS hepatic encephalopathy risk.

Inclusion

- Hemodynamic basis of portal hypertension and its clinical significance.
- Procedural principles and pressure-gradient targets for TIPS.
- Conventional treatment standards in acute variceal bleeding.
- Comparative outcomes of TIPS and endoscopic therapy for recurrent variceal bleeding.
- Comparative outcomes of TIPS and large-volume paracentesis for refractory ascites.
- Risk of hepatic encephalopathy after TIPS and factors relevant to patient selection.

Exclusion Themes: Publications focusing primarily on non-cirrhotic portal hypertension, technical radiology without clinical outcomes, and interventions unrelated to the requested comparison were not used as main evidence anchors. Material discussing retrograde transvenous obliteration was considered only as background context where it clarified the broader portal hypertension treatment landscape, not as a central comparator in this paper.

Analytical Strategy: The analytical approach was descriptive and comparative. Instead of generating original pooled estimates, this paper interprets the direction and clinical importance of already published comparative measures such as odds ratios and relative risks. This method is suitable because the user requested a paper-format discussion and not a fresh meta-analysis, while the available source set already contains robust synthesized comparisons from prior studies.[5,7,8,6]

Observation Tables

Table 1: Clinical Role by Indication

Clinical setting	TIPS role	Conventional treatment role
Acute variceal bleeding	Salvage/rescue therapy for treatment failure and early therapy in selected high-risk patients.	Initial standard of care with vasoactive drugs, antibiotics, restrictive transfusion, and endoscopic management.
Secondary prophylaxis after bleeding	Superior for preventing rebleeding in selected patients.	NSBB plus serial band ligation remains standard after successful initial control in many patients.

Refractory ascites	Effective option for better ascites control and reduction of paracentesis frequency.	Large-volume paracentesis with albumin remains conventional treatment standard.
Primary prophylaxis in compensated patients	No role in primary prophylaxis of gastric or esophageal variceal bleeding in compensated disease.	NSBBs and selective endoscopic strategies are recommended depending on risk profile and tolerance.
Broad applicability	Restricted by selection criteria and encephalopathy risk.	More widely applicable across care settings.

Table 2: Comparative Observations in Variceal Bleeding

Outcome	TIPS	Conventional/endoscopic therapy
Variceal rebleeding	Significantly lower incidence; meta-analysis reported OR 0.27 versus endoscopic therapy.	Higher recurrence compared with TIPS.
Bleeding-related death	Lower with TIPS; meta-analysis reported OR 0.21 versus endoscopic therapy.	Higher bleeding-related death than TIPS in pooled comparison.
One-year mortality in early intervention setting	Early TIPS reduced 1-year mortality with RR 0.68 in pooled RCT analysis.	Higher mortality than early TIPS in selected high-risk acute bleeding populations.
First-line emergency stabilization	Not the universal first step.	Standard immediate approach in acute variceal hemorrhage.
Use after control of bleeding	Useful when risk of failure or rebleeding is high.	NSBB plus EVL remains conventional strategy after successful initial control.

Table 3: Comparative Observations in Refractory Ascites

Outcome	TIPS	Large-volume paracentesis / conventional care
Ascites control	Better than paracentesis in pooled analyses.	Less durable control; repeated drainage often needed.
Twelve-month re-accumulation	Lower; Cochrane review reported OR 0.15 for re-accumulation at 12 months.	Higher re-accumulation rate.
Ongoing need for paracentesis	Markedly reduced after TIPS; cohort data showed major drop in LVP frequency.	Continued repeated paracentesis often required.
Survival benefit	Inconsistent in older meta-analyses; not clearly superior overall.	Comparable overall survival in older pooled analyses.
Encephalopathy	Greater risk after shunt creation.	Lower shunt-related encephalopathy burden.

Table 4: Limitations and Complications

Factor	TIPS	Conventional treatment
Hepatic encephalopathy	Common and clinically important post-procedure complication.	Lower risk relative to TIPS, though encephalopathy may still occur from underlying disease.
Requirement for expertise	Needs interventional radiology expertise, follow-up imaging, and shunt surveillance.	More feasible in general hepatology and emergency settings.
Suitability in poor liver reserve	Requires careful patient selection because over-shunting can worsen outcomes.	Often used even when invasive shunt procedures are unsuitable.
Mechanistic strength	Strongest portal decompression among the compared options.	Mechanistically less definitive for portal decompression.
Treatment philosophy	Best used as targeted intervention in selected complications.	Forms the backbone of baseline and first-line management.

Result

The reviewed evidence demonstrates that TIPS produces more direct and usually more profound improvement in portal hypertension than conventional treatment because it addresses the portal-systemic pressure gradient itself. This direct decompression is particularly important in patients

whose clinical course is dominated by recurrent variceal hemorrhage or refractory ascites despite appropriate medical and endoscopic therapy.

In the setting of variceal bleeding, conventional treatment remains essential at presentation. Current standard care includes hemodynamic stabilization, restrictive transfusion, early vasoactive drugs, antibiotic prophylaxis, and endoscopic therapy, which together control many acute bleeding episodes and remain the first therapeutic sequence in routine practice. Nevertheless, comparative evidence shows that TIPS is superior to endoscopic therapy for prevention of recurrent variceal bleeding. A meta-analysis involving 24 studies found that TIPS significantly reduced variceal rebleeding and bleeding-related death compared with endoscopic treatment, although overall survival was not significantly different in the pooled secondary-prophylaxis literature.

Overall, the results support a layered interpretation. Conventional treatment is indispensable as first-line management and remains adequate for many patients, especially those with compensated disease or those who respond well to pharmacologic and endoscopic therapy. TIPS is superior when the treatment objective is robust portal decompression, strong prevention of recurrent variceal bleeding, or effective control of refractory ascites in properly selected patients with acceptable risk profile.

Statistical Analysis: For recurrent variceal bleeding, a meta-analysis of TIPS versus endoscopic therapy reported an odds ratio of 0.27 for variceal rebleeding, indicating that the odds of rebleeding were substantially lower with TIPS than with endoscopic treatment alone. The same analysis reported an odds ratio of 0.21 for bleeding-related death, again favoring TIPS, while overall survival did not show a statistically significant difference in that pooled data set. These values suggest that TIPS is particularly effective for controlling the portal hypertensive event itself, even if all-cause survival is influenced by broader cirrhosis-related factors beyond rebleeding prevention.

From an interpretive standpoint, these statistics support three conclusions. First, TIPS has strong effect sizes for outcomes directly linked to portal decompression, especially rebleeding and recurrent ascites. Second, outcomes such as overall survival are less uniformly improved because survival in cirrhosis is multifactorial. Third, clinical decision-making must therefore balance efficacy endpoints against complication risk, especially hepatic encephalopathy, rather than relying on any single pooled statistic.

Discussion

Transjugular intrahepatic portosystemic shunt (TIPS) has evolved from a rescue decompressive procedure into a carefully selected, evidence-based intervention for the management of portal hypertension, particularly in patients with uncontrolled variceal bleeding, refractory ascites, and selected vascular complications. Early authoritative reviews by Boyer and Haskal established that TIPS should not be viewed as universal first-line therapy, but rather as a highly effective portal decompressive strategy whose value depends on indication, timing, liver reserve, and post-procedural surveillance. Colombato similarly emphasized the strong hemostatic efficacy of TIPS for variceal bleeding.

A central point of comparison between our study and the classic literature is the clinical indication for TIPS placement. Boyer and Haskal described TIPS primarily as a salvage or second-line therapy for complications driven by clinically significant portal hypertension, especially uncontrolled variceal hemorrhage and difficult ascites, while cautioning against indiscriminate use because of encephalopathy and hepatic dysfunction risks. Pomier-Layrargues and colleagues later reinforced that randomized trials did not support TIPS as routine first-line therapy for all variceal bleeding, but did confirm a definite role when standard medical and endoscopic treatment failed. If our study included a substantial proportion of patients undergoing TIPS for refractory or recurrent complications after failure of conventional therapy, that pattern aligns closely with these landmark references; however, if our cohort demonstrated earlier intervention or broader indications, then our findings suggest how contemporary selection may be moving toward proactive use in better-defined high-risk subgroups rather than purely rescue settings.

The effectiveness of TIPS in controlling variceal hemorrhage remains one of the strongest areas of agreement between our study and the cited literature. Colombato reported excellent hemostatic efficacy, with approximately 95% control of bleeding and low rebleeding rates, supporting the reputation of TIPS as a reliable decompressive therapy after failure of first-line treatment. This general conclusion was later sustained by broader reviews and guidance documents, which continued to identify TIPS as a key option for refractory acute bleeding and for selected patients at high risk of treatment failure. Therefore, if our study showed prompt bleeding control and low early rebleeding after shunt creation, it would be consistent with the established evidence base; if rebleeding in our series remained higher than in these reports, the difference may reflect delayed referral, more advanced liver dysfunction, technical issues, or inadequate post-TIPS surveillance rather than a contradiction of the overall literature.[2,4,5]

Our study can also be compared with the literature on secondary prophylaxis and long-term bleeding

prevention after index hemorrhage. Earlier reviews consistently showed that TIPS reduces recurrent variceal bleeding more effectively than endoscopic or pharmacologic therapy, although this benefit was historically offset by higher rates of hepatic encephalopathy and uncertain survival benefit in unselected populations. The practical implication for comparison is that a favorable rebleeding profile in our study would be expected and would reinforce the mechanical superiority of portal decompression, whereas any limited survival gain in our cohort would also mirror the long-recognized tension between better bleeding control and the competing risks of liver failure, comorbidity, or encephalopathy. Thus, if our outcomes showed improved control of portal hypertensive bleeding without proportional improvement in overall mortality, our findings would still be very much in line with historical evidence rather than being unexpectedly negative.[1,3]

Another major comparison concerns refractory ascites, where the role of TIPS has progressively expanded. Lee and Lee summarized that TIPS is effective not only for variceal hemorrhage but also for recurrent or refractory ascites, and highlighted evidence suggesting survival benefit in carefully selected patients. The 2020 Gut guidance likewise framed TIPS as an important option for ascites while emphasizing exclusion criteria such as high bilirubin, thrombocytopenia, pre-existing encephalopathy, active infection, severe cardiac failure, or severe pulmonary hypertension. If our study demonstrated substantial improvement in ascites control, reduced paracentesis requirement, or better quality of life after TIPS, these findings would accord with contemporary evidence; however, if clinical benefit was modest, that may indicate our cohort had a higher baseline risk profile or more advanced systemic dysfunction than the populations most likely to benefit in the modern literature.

The issue of patient selection is perhaps the most clinically meaningful area in which our study should be interpreted against prior reports. Later reviews stressed that TIPS outcomes improve considerably when prognostic scores and organ reserve are incorporated into decision-making, and that careful evaluation of cardiac and renal function before the procedure can reduce post-TIPS decompensation. Educational summaries derived from established practice have further noted that a MELD score above 18 is associated with substantially higher 3-month mortality after TIPS, underscoring why procedural success alone is not an adequate endpoint. Therefore, if our study found poorer outcomes among patients with worse hepatic reserve, renal impairment, or cardiocirculatory compromise, that would strongly parallel the modern evidence base; conversely, if our good results were achieved in a lower-risk cohort, they should be interpreted as confirmation of the value of appropriate selection rather than proof that TIPS is equally safe in all patients with portal hypertension.[6,7,8,9]

Hepatic encephalopathy remains the principal adverse event against which most TIPS studies are judged, and this makes comparison with the literature essential. Lee and Lee emphasized that although TIPS relieves portal pressure and can improve systemic hemodynamics, its use is limited by non-negligible rates of hepatic encephalopathy and potential hepatic or cardiac dysfunction. Tripathi and colleagues similarly advised caution in patients with prior encephalopathy and other high-risk features when considering TIPS, reflecting the consistent concern that decompression may worsen neurocognitive complications even as it improves portal hypertensive manifestations. If our study recorded encephalopathy as the most frequent complication, that is entirely concordant with the references; if our rate was lower than earlier literature, possible explanations include improved stent technology, more selective inclusion, or better prophylactic and follow-up strategies rather than a fundamental divergence from known TIPS physiology.[7,4]

Technical evolution is another point that explains why some findings in our study may compare favorably with older reports. Reviews of the modern era note that polytetrafluoroethylene-covered stents became the preferred option because they improved shunt patency and reduced dysfunction compared with bare metal stents, thereby strengthening long-term effectiveness. Pomier-Layrargues and colleagues explicitly linked improved clinical results over time to technical advances and growing operator experience. Accordingly, if our study documented high technical success, lower dysfunction, or better medium-term outcomes than older cohorts, those results should be interpreted in light of advancements in stent design and procedural expertise, not merely as differences in patient biology.[5,3]

Follow-up outcomes are particularly relevant when comparing our work with Xue and colleagues, whose study focused on post-TIPS surveillance and longitudinal results. Their report highlighted the importance of follow-up in identifying shunt dysfunction, recurrent symptoms, and long-term clinical evolution after TIPS for portal hypertension, reinforcing that treatment success cannot be assessed only at the time of insertion. Contemporary clinical guidance also recommends early Doppler ultrasound surveillance after placement to establish baseline shunt flow and support later detection of malfunction. If our study incorporated serial imaging and clinical review, then its design is methodologically aligned with these principles; if not, any apparently lower dysfunction rate in our cohort should be interpreted cautiously because

limited surveillance can underestimate clinically relevant shunt problems.[8,10]

The progression of the evidence base from the mid-2000s to the 2020s also helps explain differences between our study and the broader literature. Boyer and Haskal wrote in an era when TIPS was already established but still burdened by concerns about patency, encephalopathy, and uncertainty regarding optimal indications. By the time of the Gut guideline and the 2021 review by Lee and Lee, the emphasis had shifted toward refined indications, earlier use in selected high-risk bleeding, better ascites data, and more structured contraindication assessment. If our study resembles the older literature in caution and complication profile, it may reflect a real-world population with advanced disease; if it resembles newer literature in favorable outcomes, that would support the view that modern practice benefits from improved selection, surveillance, and stent technology.[4,7,1]

One useful way to frame our findings is through comparison with guideline-based recommendations. The British Society of Gastroenterology guidance recognizes TIPS as an established option in portal hypertension but clearly delineates settings where benefit is highest and settings in which risk may outweigh benefit, especially in those with severe liver dysfunction, infection, pulmonary hypertension, or cardiac disease. This is consistent with the advantages-and-pitfalls framework proposed by Lee and Lee, who argued that the procedure should be seen neither as a last resort in every case nor as a routine intervention, but as a targeted therapy requiring multidimensional assessment. Thus, if our study concluded that outcomes depend strongly on pre-procedure stratification, that conclusion is not only comparable with but strongly supported by current guidance and review literature.[11,7,4]

Our results may also be discussed in relation to noncirrhotic portal hypertension, where the literature suggests a somewhat different risk-benefit balance. Bissonnette and colleagues reported that in idiopathic noncirrhotic portal hypertension, TIPS can be an excellent option for severe complications, particularly in patients without major extrahepatic comorbidity or renal dysfunction. This contrasts with cirrhotic portal hypertension, where hepatic reserve and systemic decompensation exert a much stronger influence on post-TIPS prognosis. Therefore, if our study involved only cirrhotic patients, any worse morbidity or mortality compared with Bissonnette's cohort would be expected and should not be interpreted as inferior technical performance; rather, it reflects the fundamentally different substrate of portal hypertension across disease categories.[12,7]

Another less conventional but increasingly relevant comparison comes from the use of TIPS as a bridge to non-hepatic surgery in selected cirrhotic patients. Lahat and colleagues, in a systematic review of 64 patients across 19 studies, found that preoperative TIPS was technically successful in all reported cases, allowed surgery after a median delay of 30 days, and was associated with 8% postoperative mortality and 80% one-year survival, although morbidity remained substantial. Although this indication differs from the usual bleeding-and-ascites focus, it reinforces the broader principle that portal decompression can modify downstream clinical risk when used selectively. If our study did not address surgical bridging, that gap may be worth noting as a contrast with the expanding literature; if it did include such patients, their outcomes should be analyzed separately because preoperative optimization is a distinct clinical context from emergency hemorrhage control or refractory ascites treatment.[13]

The international experience described by Lv, Fan, and Han adds a valuable long-view perspective for interpreting our findings. Their review of 30 years of Chinese experience concluded that TIPS has become an increasingly important and effective therapy for portal hypertension complications, while also showing how national practice patterns evolve with disease etiology, device availability, and procedural expertise. This historical perspective is useful because differences between our study and older Western references may stem not only from patient-level variables but also from era-specific and region-specific practice environments. If our study demonstrates better technical success or broader application, it may reflect the same global maturation of TIPS programs described in this long-term experience rather than an isolated institutional effect.[14,15]

A balanced comparison must also address the fact that TIPS improves portal hypertensive complications without correcting the underlying liver disease. Multiple reviews emphasize that while TIPS decompresses the portal system and can stabilize related complications, it may precipitate hepatic dysfunction or unmask limited hepatic reserve because portal flow is diverted away from the liver. This principle helps explain why studies can simultaneously report excellent control of bleeding or ascites yet still observe significant short-term mortality in advanced cirrhosis. If our study showed dissociation between symptomatic improvement and survival, that pattern is biologically and clinically consistent with the literature and should be explicitly discussed rather than presented as a paradox.[9,7,8]

When placed beside the cited references as a whole, our study should therefore be interpreted through three major axes: indication, selection, and follow-

up. The literature consistently shows that TIPS works best when used for well-defined complications of portal hypertension, especially refractory bleeding and ascites, in patients who retain sufficient hepatic, renal, and cardiac reserve. It also shows that complications such as encephalopathy, shunt dysfunction, and post-procedural hepatic decompensation remain central determinants of outcome and must be integrated into any comparative discussion. Accordingly, similarities between our study and prior reports strengthen the validity of our observations, whereas differences should be interpreted in relation to cohort severity, technology used, surveillance intensity, and the evolving standards of TIPS practice rather than as simple contradictions[3,6,7,8,4]

Overall, the cited references support a nuanced interpretation of our study rather than a purely favorable or unfavorable one. Foundational reviews by Boyer and Haskal and Colombato established the efficacy of TIPS as a decompressive intervention, later reviews and guidelines refined its indications and contraindications, and more recent publications expanded its application while emphasizing selection and complication management. Therefore, if our study demonstrates effective control of portal hypertensive complications with acceptable but non-trivial adverse events, it is broadly concordant with the accumulated literature; if it shows either unusually strong benefit or unexpectedly poor outcomes, those differences should be discussed in relation to case mix, timing of intervention, stent technology, and peri-procedural assessment rather than in isolation. Such a comparative interpretation places our findings within the established evolution of TIPS from a technically impressive rescue procedure to a strategically deployed therapy in modern portal hypertension management

Conclusion

Portal hypertension is one of the defining hemodynamic abnormalities of cirrhosis and a major cause of decompensation, recurrent hospitalization, and death. Any treatment comparison in this field must therefore ask not only which therapy reduces symptoms, but which approach most effectively modifies the underlying portal pressure while remaining safe for the specific patient. The final interpretation is balanced but clear. Conventional treatment remains indispensable because it is foundational, accessible, and appropriate for initial management and long-term care in many patients with portal hypertension. Yet when judged by direct portal decompression, prevention of recurrent variceal bleeding, and control of refractory ascites, TIPS is the more powerful intervention in suitable candidates. The best contemporary management model is therefore integrative: conventional treatment for universal first-line care, and timely TIPS for selected patients in whom direct decompression offers a better chance of controlling clinically significant portal hypertension.

References

1. Boyer TD, Haskal ZJ. The role of transjugular intrahepatic portosystemic shunt in the management of portal hypertension. Hepatology. 2005 Feb;41(2):386-400.
2. Colombato L. The role of transjugular intrahepatic portosystemic shunt (TIPS) in the management of portal hypertension. Journal of clinical gastroenterology. 2007 Nov 1;41:S344-51.
3. Xue H, Yuan J, Chao-Li Y, Palikhe M, Wang J, Shan-Lv L, Qiao W. Follow-up study of transjugular intrahepatic portosystemic shunt in the treatment of portal hypertension. Digestive diseases and sciences. 2011 Nov;56(11):3350-6.
4. Parker R. Role of transjugular intrahepatic portosystemic shunt in the management of portal hypertension. Clinics in liver disease. 2014 May 1;18(2):319-34.
5. Lee HL, Lee SW. The role of transjugular intrahepatic portosystemic shunt in patients with portal hypertension: Advantages and pitfalls. Clinical and molecular hepatology. 2021 Sep 27;28(2):121.
6. Pomier-Layrargues G, Bouchard L, Lafortune M, Bissonnette J, Guérette D, Perreault P. The transjugular intrahepatic portosystemic shunt in the treatment of portal hypertension: current status. International journal of hepatology. 2012;2012(1):167868.
7. Bissonnette J, Garcia-Pagán JC, Albillos A, Turon F, Ferreira C, Tellez L, Nault JC, Carbonell N, Cervoni JP, Abdel Rehim M, Sibert A. Role of the transjugular intrahepatic portosystemic shunt in the management of severe complications of portal hypertension in idiopathic noncirrhotic portal hypertension. Hepatology. 2016 Jul;64(1):224-31.
8. Lahat E, Lim C, Bhangui P, Fuentes L, Osseis M, Moussallem T, Salloum C, Azoulay D. Transjugular intrahepatic portosystemic shunt as a bridge to non-hepatic surgery in cirrhotic patients with severe portal hypertension: a systematic review. Hpb. 2018 Feb 1;20(2):101-9.
9. Tripathi D, Stanley AJ, Hayes PC, Travis S, Armstrong MJ, Tsochatzis EA, Rowe IA, Roslund N, Ireland H, Lomax M, Leithead JA. Transjugular intrahepatic portosystemic stent-shunt in the management of portal hypertension. Gut. 2020 Jul 1;69(7):1173-92.
10. Vizzutti F, Schepis F, Arena U, Fanelli F, Gitto S, Aspite S, Turco L, Dragoni G, Laffi G, Marra F. Transjugular intrahepatic portosystemic shunt (TIPS): current indications and strategies

to improve the outcomes. Internal and emergency medicine. 2020 Jan;15(1):37-48.
11. Artru F, Moschouri E, Denys A. Direct intrahepatic portocaval shunt (DIPS) or transjugular transcaval intrahepatic portosystemic shunt (TTIPS) to treat complications of portal hypertension: indications, technique, and outcomes beyond Budd-Chiari syndrome. Clinics and research in hepatology and gastroenterology. 2022 Apr 1;46(4):101858.
12. Lv Y, Fan D, Han G. Transjugular intrahepatic portosystemic shunt for portal hypertension: 30 year's experience from China. Liver International. 2023 Jan;43(1):18-33.