

Conservative management of pediatric patients with solid organ injury after blunt abdominal trauma. Consensus sponsored by the Spanish Society of Pediatric Surgery

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ABSTRACT

Introduction. The treatment of choice in pediatrics for solid organ injuries resulting from blunt abdominal trauma is conservative management. However, in Spain, said management has proven to be heterogeneous and inconsistent with recent evidence. The Spanish Society of Pediatric Surgery (SECP) sponsored the development of this consensus document in the year 2024.

Materials and methods. After recruiting a group of experts, a bibliographic review was conducted using the systematic reviews from APSA, the ATOMAC group, and contributions from the experts themselves, to draft a series of initial suggestions. The experts, using the Delphi method, scored these (Likert scale) in different voting rounds until statistical stability in the responses was determined (Wilcoxon Test). Consensus was defined as agreement (scores 4-5) exceeding 70%.

Results. Twelve experts from 11 centers were recruited, achieving gender parity. Seventeen suggestions were developed, organized into four key areas: PICU admission, discharge criteria and strict bed rest, analytical/radiological controls, and physical activity restriction. Statistical stability was reached after 2 scoring rounds, achieving consensus on 15 of the 17 suggestions, while it was not achieved regarding hospital discharge criteria and duration of strict bed rest.

Conclusions. Through Delphi methodology, a consensus document on the conservative management of solid organ injuries was developed. Although consensus was not reached on key aspects such

as discharge criteria and strict bed rest, this document aims to help homogenize clinical practice.

KEY WORDS: Wounds, nonpenetrating; Abdominal injuries; Conservative treatment; Consensus.

MANEJO CONSERVADOR DEL PACIENTE PEDIÁTRICO CON LESIÓN DE VÍSCERA SÓLIDA TRAS TRAUMATISMO ABDOMINAL CERRADO. CONSENSO AUSPICIAO POR LA SOCIEDAD ESPAÑOLA DE CIRUGÍA PEDIÁTRICA

RESUMEN

Introducción. El tratamiento de elección en pediatría de las lesiones de víscera sólida por traumatismo abdominal cerrado es el conservador. Sin embargo, en nuestro país, dicho manejo se ha demostrado heterogéneo y en disconformidad con la evidencia reciente. La Sociedad Española de Cirugía Pediátrica (SECP) auspició la elaboración de este documento de consenso en el año 2024.

Material y métodos. Tras reclutar un grupo de expertos, se realizó una revisión bibliográfica empleando las revisiones sistemáticas de la APSA, el grupo ATOMAC y las aportaciones de los propios expertos, para redactar una serie de sugerencias iniciales. Los expertos, mediante método Delphi, puntuaron las mismas (escala Likert) en diferentes rondas de votación hasta que se determinó la estabilidad estadística en las respuestas (Test de Wilcoxon). Se consideró consenso, un acuerdo (puntuaciones 4-5) por encima del 70%.

Resultados. Se reclutaron 12 expertos de 11 centros, obteniéndose paridad de grupo. Se elaboraron 17 sugerencias, organizadas en cuatro áreas clave: Ingreso en UCIP, criterios de alta y reposo absoluto, controles analíticos/radiológicos y restricción de actividad física. Se alcanzó la estabilidad estadística tras 2 rondas de puntuación, alcanzándose consenso en 15 de las 17 sugerencias, no lográndose en cuanto a los criterios de alta hospitalaria y duración del reposo absoluto.

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Conclusiones. Mediante metodología Delphi se elaboró un documento de consenso sobre el manejo conservador de las lesiones de víscera sólida. Aunque no se logró consenso en aspectos clave como los criterios de alta y el reposo absoluto, este documento pretende ayudar a homogeneizar la práctica clínica.

PALABRAS CLAVE: Trauma abdominal; Lesión de víscera sólida; Tratamiento conservador; Consenso.

INTRODUCTION

Conservative treatment of solid organ injuries following blunt abdominal trauma in pediatrics is the gold standard in Spain. However, there are scarce studies detailing how this conservative management is developed in our environment. In the *Survey on the conservative management of solid organ injury (spleen/liver/kidney) secondary to blunt abdominal trauma in Spain*, presented at the LXI National Congress of Pediatric Surgery in 2024, it was revealed that the same patient presented very different hospitalizations and management depending on the hospital center where they were admitted⁽¹⁾.

In the second part of the study, which analyzed adherence to the 2019 American Pediatric Surgical Association (APSA) guidelines on conservative management, poor adherence to criteria for admission to the Pediatric Intensive Care Unit (PICU), strict bed rest, and analytical-radio-logical controls was highlighted. Furthermore, 96.5% of respondents considered it necessary for the Spanish Society of Pediatric Surgery (SECP) to develop a document in this regard to help standardize clinical practice⁽²⁾.

In response to these results, the SECP assembly of May 2024 agreed to undertake a project to generate a consensus for the treatment of these patients. The objective of this work, under the auspices of the SECP, was to analyze the causes of heterogeneity in management and the apparent lack of adherence to APSA protocols, with the purpose of developing a consensus document for clinical decision-making in these patients. Given the lack of studies on this matter in our environment, the difficulty in discerning the causes of low adherence to published guidelines through other types of studies, as well as the express purpose of developing our own guideline at the national level, the Delphi methodology was selected as the most suitable for the creation of said document.

MATERIALS AND METHODS

The study was divided into 3 phases: expert recruitment, qualitative and synthesis phase, and quantitative consensus phase following the Delphi method. The process is summarized in Figure 1.

The experts who formed part of the panel were selected in agreement with the SECP Pediatric Trauma Commission

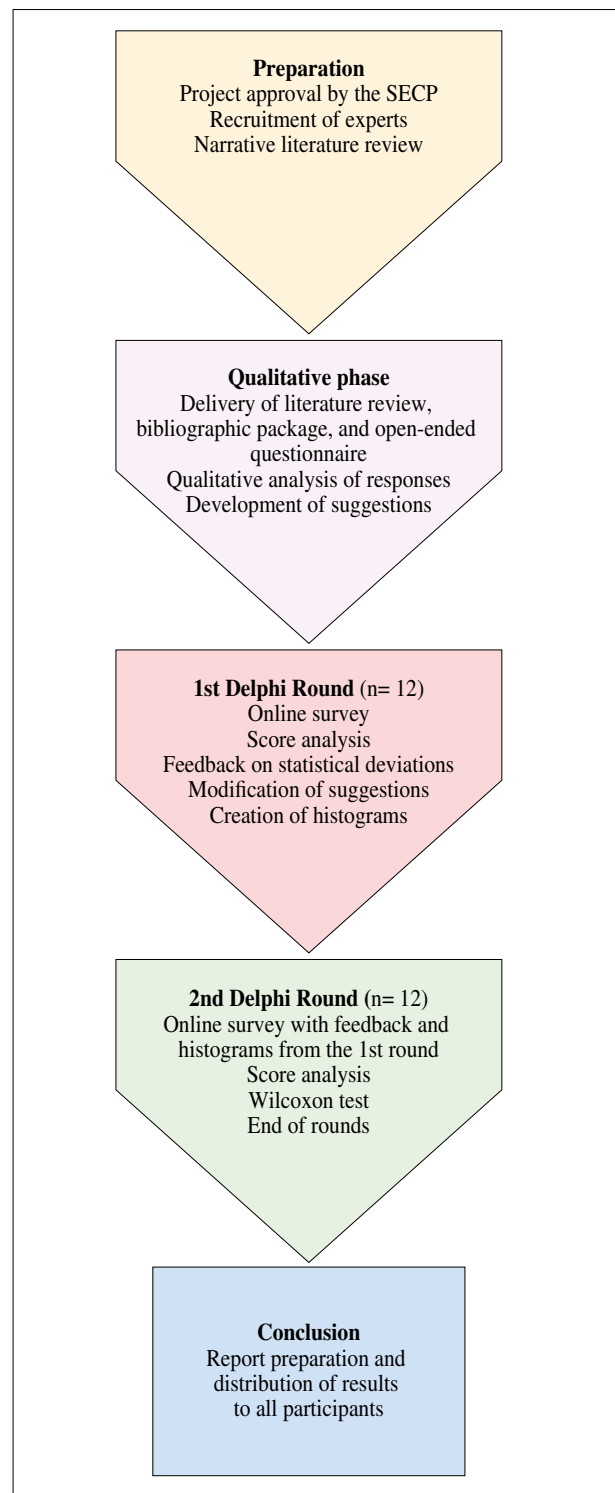


Figure 1. Phases of the Consensus, detailing the number of participants in each Delphi round (created with Lucidchart®).

through weighting of their professional experience, their experience in polytrauma, and their involvement in teaching and research in this area. Candidates were recruited

from the Pediatric Trauma Commission itself, upon proposal by the different Heads of Pediatric Surgery Services contacted through the SECP, and from participants of the *Survey on the conservative management of solid organ injury (spleen/liver/kidney) secondary to blunt abdominal trauma in Spain*. Once selected, all collaborators received the explanatory documentation of the process.

Qualitative and synthesis phase

In this phase, the coordination (first and last author) prepared a bibliographic review through systematic reviews already conducted by the ATOMAC group in 2015⁽³⁾ and by APSA in 2019⁽⁴⁾ and 2023⁽⁵⁾, which was sent to the experts along with an open-response questionnaire.

In said questionnaire, their opinion was collected regarding PICU admission, duration of admission and strict bed rest, analytical or imaging controls, as well as outpatient controls and periods of sports rest. For each item, they were also required to express their assessment on whether differences should exist in addressing these issues based on the type of pediatric surgery call duty (physical presence or on-call). Finally, they could contribute any bibliography or documents they considered important for their assessment.

After collecting said information and with the evidence obtained in the bibliographic review, the coordinating group drafted a series of suggestions.

Quantitative and consensus phase

In this phase, the suggestions were scored by the experts, using a Likert scale (from 1 to 5), via a Google Forms® questionnaire. The coordinating group did not participate in the scoring.

The necessary rounds were conducted until statistical stability in scores was reached (with a minimum of 2 rounds), determined through the variation in scoring medians using a Wilcoxon Test, considering a $p < 0.05$ as significant.

After each round, experts whose scores deviated significantly from the median were contacted to understand the reasons justifying their score differing from the rest of the experts. These clarifications allowed for slight modifications in the wording of the suggestions. All panelists received said anonymized information along with the distribution of scores from the previous round and the statistical measures performed before the next scoring round.

Consensus was defined as a Relative Interquartile Range (RIR) of less than 40% and a percentage of agreement (scores 4 or 5) greater than 70%. Once the scoring rounds were finalized, only those suggestions meeting these requirements would pass to the rank of recommendations.

For the preparation of this article, CREDES recommendations for Delphi studies were followed⁽⁶⁾.

RESULTS

Twelve experts from 11 different centers were recruited, achieving gender parity, with a median professional experience of 11.5 years (7.5-17.3). After the initial qualitative phase, a total of 17 suggestions were drafted, applicable to hospitals with both physical presence and on-call duties.

100% of the experts participated in the first round of scoring, where suggestions 4, 6, 8, 9, and 16 obtained scores with significant deviations by several experts. After assessing the feedback offered by them, the wording of suggestions 4, 6, 8, and 9 was modified.

100% of the experts participated in the second round of scoring; however, despite the modifications, no statistically significant differences were observed between the medians of the scores of the first and second rounds for any of the items. Therefore, statistical stability was considered achieved, and the expert assessment phase was finalized.

Of the total 17 suggestions developed, 15 met the consensus criteria established *a priori*, thus reaching the rank of recommendation. The results of the scoring rounds are detailed in Table I.

The 15 recommendations and 2 suggestions are listed below:

Criteria for admission to PICU or other units and discharge from them

Recommendation 1. PICU Admission criteria

Agreement: 100%

Admission to PICU is recommended for patients with solid organ injuries following blunt abdominal trauma in the following situations:

- Hemodynamic instability: Defined as altered vitals (HR/BP) after initial fluid resuscitation, having ruled out/treated causes of pseudo-compromise such as pain, anxiety, or hypothermia. These patients therefore correspond to transient responders or non-responders of the ATLS framework.
- Monitoring after procedures: Surgery, endovascular treatments, transfusions, chest tube placement.
- Need for vasoactive support or respiratory support.
- Control of other associated injuries requiring PICU admission: Traumatic brain injury, spinal cord injury, multiple fractures, myocardial contusion.

Recommendation 2. Conditions for observation without PICU admission

Agreement: 92%

For those patients who do not meet these criteria, the following care should be offered:

- Vital signs control during the first 24h since the trauma (continuous monitoring of heart rate and saturation with pulse oximeter, non-invasive blood pressure con-

Table 1. Scores for each suggestion across two voting rounds (Likert scale 1-5, Wilcoxon test values, and degree of agreement).

Suggestion	1st round			2nd round			p-value	RIR	Agreement (score 4 or 5)
	Me	p25	p75	Me	p25	p75			
1	5	5	5	5	5	5	0.317	0	100%
2	5	4	5	5	4.25	5	0.581	0.15	92%
3	5	5	5	5	5	5	0.317	0	100%
4	4	2.25	5	4	3	5	0.877	0.5	58%
5	5	5	5	5	5	5	0.854	0	92%
6	4	3.25	5	5	4	5	0.262	0.2	92%
7	5	5	5	5	5	5	1	0	100%
8	3	1.25	5	4	2	5	0.369	0.67	58%
9	4.5	3.25	5	5	4.25	5	0.119	0.15	100%
10	5	5	5	5	5	5	0.414	0	100%
11	5	4	5	5	4.25	5	0.792	0.15	92%
12	5	5	5	5	5	5	0.564	0	100%
13	5	4	5	5	5	5	0.334	0	92%
14	5	4	5	5	5	5	0.102	0	100%
15	5	5	5	5	5	5	0.317	0	100%
16	5	3.25	5	5	4	5	0.887	0.2	83%
17	5	5	5	5	5	5	0.180	0	100%

trol, diuresis control, and pain assessment): The first 8 hours every 2h and subsequently every 4h.

- Serial abdominal examinations at least once per shift, with greater frequency depending on vitals, pain, and appearance of other symptoms (vomiting).
- Possibility of analytical or blood gas controls.

Each center, depending on its structure and resources (material and personnel), will decide where to locate these patients in order to guarantee these minimum cares, whether in the emergency department, pediatric surgery hospitalization ward, intermediate care unit, post-anesthesia care unit, or PICU. In those centers without physical presence of pediatric surgery, during these initial 24h, observation in a conventional ward should be avoided, so that the patient is always under the care of a physician present in the hospital.

Recommendation 3. PICU discharge criteria

Agreement: 100%.

It is recommended that those patients who have been admitted to PICU transfer to the ward when:

- They present hemodynamic stability for 24h.
- They do not require respiratory or vasoactive support.
- They maintain stable hemoglobin.
- They present adequate pain control with conventional analgesia.

Duration of admission, hospital discharge criteria, and strict bed rest

Suggestion 4. General discharge criteria

Agreement: 58%

Patients may be discharged when they are stable, without clinical signs of complication, tolerating oral diet, and with pain strictly controlled with oral medication. The fulfillment of these objectives will determine the duration of admission and not the grade of injury. A minimum hospital observation period of 24h after trauma and 48h in case of bicycle handlebar injuries and seatbelt syndrome is still recommended.

Recommendation 5. Prolongation of admission

Agreement: 92%

Admission may be prolonged (for a reasonable period of 24-48h) in the case of patients whose residence is far from any type of hospital (more than 1h) or who require some non-conventional means of transport (plane, boat) to access it. These measures will also be considered in cases where there is social lack of protection or vulnerability.

Recommendation 6. Renal trauma

Agreement: 92%

The same criteria will apply in the case of patients with renal trauma, with it not being necessary to wait for

the complete resolution of hematuria, provided that the patient commits to an adequate hydration level and does not present voiding symptoms.

Recommendation 7. Information at discharge

Agreement: 100%

Given that it is not possible to predict which patients may develop complications, the symptoms and reasons why they should return to the emergency department must be explained in detail to the patient and their family.

Suggestion 8. Strict bed rest

Agreement: 58%

Once a period of hemodynamic stability of 24h has been fulfilled and provided there is no other associated injury contraindicating it, patient ambulation should be assessed (within the range that is comfortable for them) regardless of the injury grade or affected organ.

Analytical or imaging controls

Recommendation 9. Serial analytics in PICU

Agreement: 100%

During the patient's stay in PICU (see admission criteria in recommendation 1), a hemoglobin check should be performed every 6 hours until normalization of vital signs, without prejudice to other controls that must be carried out for injuries to other organs or systems, at the discretion of the pediatric intensivist.

Recommendation 10. Serial analytics in the ward

Agreement: 100%

In the case of stable and asymptomatic patients admitted to the hospitalization ward or other units, a control may be performed at 24h post-trauma/admission or solely maintenance of vital signs monitoring.

Recommendation 11. Imaging controls. General recommendation

Agreement: 92%

Available evidence does not support the performance of control imaging tests in stable and asymptomatic patients during admission or subsequently, given that it does not translate into changes in treatment; therefore, its performance is not recommended. In case the clinician deems such a test necessary, it should not cause unnecessary prolongation of admission or unjustified exposure to ionizing radiation.

Recommendation 12. Imaging controls. Special recommendation

Agreement: 100%

Separate mention is required for pseudoaneurysms, given that their natural history is yet to be defined and

they can cause a sudden episode of significant bleeding without prior symptoms; each center must define its position regarding the management of these lesions. Similarly, given that the progression or non-resolution of asymptomatic urinomas implies a reason for surgical indication, the performance of control tests is justified in patients with high-grade renal trauma. As well as the performance of DMSA in extensive renal lesions that may compromise renal function. In any case, the performance of imaging tests for these reasons must not conflict with the general considerations previously mentioned.

Physical activity restrictions and return to school

Recommendation 13. Duration of physical activity restriction

Agreement: 92%

After discharge, patients must maintain sports rest for a period equal to the injury grade + 2 weeks from the trauma.

Recommendation 14. Home observation

Agreement: 100%

It is recommended that patients remain under home observation during the first week after discharge to facilitate pain control and symptom monitoring.

Recommendation 15. Return to school

Agreement: 100%

Once the week of home observation is completed, patients who evolve correctly without incidents could return to their habitual activity at school provided they respect the rest from physical activity (physical education/recess/extracurriculars/games) and measures can be taken to adapt the school schedule to avoid crowds. In those cases where this cannot be carried out, tele-education should be encouraged to, as far as possible, normalize the patient's convalescence.

Recommendation 16. Types of sports

Agreement: 83%

Given the ambiguity in practice between sports and contact sports as well as the lack of guidance on how to act for the latter, the rest period will be the same for all types of sports (injury grade + 2 weeks).

Organization

Recommendation 17. Renal trauma and Pediatric Urology sections

Agreement: 100%

It is recommended to involve a pediatric urologist in the management of patients with renal injuries, especially from grade IV lesions onwards, in those Pediatric Surgery services that are organized by sections.

DISCUSSION

The management of the patient with solid organ injury after blunt trauma is heterogeneous, although it remains under the unifying umbrella of “conservative treatment”.

In this work, we gathered a group of experts in pediatric polytrauma to, through Delphi methodology, develop a consensus that would standardize the details of said conservative management. As a result of this effort, a total of 15 recommendations applicable in centers with both physical presence and on-call duties were reached, with the consensus criteria marked *a priori* not being achieved in the case of 2 of the suggestions.

During the qualitative and synthesis phase, suggestions were developed through the convergence of the bibliographic review and expert contributions. The reasoning and bibliographic support for each of them are justified below.

Recommendation 1: PICU Admission criteria

The APSA recommendations of the year 2000 set the PICU admission criterion for those patients with hemodynamic instability and/or grade IV injuries. Said recommendation based on grade was decided due to a higher prevalence of transfusions and need for surgery in this group with respect to the rest⁽⁷⁾. However, this theoretical approach implied the PICU admission of a high percentage of patients who required neither therapeutics nor special monitoring. Successive publications and guidelines have changed these criteria, demonstrating that physiological assessment is more precise, and that admission outside of PICU does not result in significant rates of unexpected PICU admission^(3-5,8-18).

Recommendation 2: Conditions for observation without PICU admission

The failure rate of conservative treatment of solid organ injuries secondary to blunt trauma for any reason is 7% (3.4% due to bleeding), with 75% occurring before 21h post-trauma⁽⁹⁾. Therefore, all patients within the first 24h should, even if they do not meet PICU admission criteria, receive adequate monitoring. The frequency of taking vitals is not the same in all publications. With the idea of following a physiological criterion and not an imaging criterion, monitoring every 2h during the first 8h was chosen^(3,8,9,11,13).

Recommendation 3: PICU Discharge criteria

These chosen criteria are consistent with recommendation 1 and with the same supporting studies^(3,8-11,13,15,18), which specify concrete criteria for moving from PICU to the ward, mainly hemodynamic and hematocrit stability.

Suggestion 4: General discharge criteria

This suggestion, which did not reach the necessary agreement, was based on different studies subsequent

to the APSA clinical guidelines from 2000, which found lower readmission/complication rates following a clinical discharge criterion as opposed to an imaging one^(3-5,8-11,13,15,18-21). As well as, the recommendations of various authors on minimum observation periods, assessing the time window of conservative treatment failure^(9,23,24) and the prevalence of late bleeding^(9,22).

Recommendation 5: Prolongation of admission

Despite the fact that conservative treatment failure rarely occurs in asymptomatic patients after the first 24h^(9,23), the available data prevent predicting which patients may develop late complications. This recommendation was drafted to take into account special situations that may hinder the reassessment of patients who require it.

Recommendation 6: Renal trauma

Various authors recommend assimilating the recommendations for splenic or hepatic trauma to renal trauma^(4,5,18,25,26). Given that the resolution of hematuria can take weeks, several protocols have excluded this criterion as a condition for discharge, without significantly higher readmissions^(9,11,14,25).

Recommendation 7: Discharge information

The development of complications can occur both during admission and after discharge^(3,9,15,22,26-28). Therefore, the warning signs must be clearly explained to the patient and their family.

Suggestion 8: Absolute rest

This suggestion did not reach the level of agreement required *a priori*, despite the fact that there is abundant available literature that does not observe any association between early mobilization and the development of complications^(3-5,8-11,13-15,18-21,25).

Recommendations 9 and 10: Serial laboratory tests in PICU and on the ward

Available literature supports eliminating routine hemoglobin checks in patients with normal vital signs. Patients requiring transfusion, embolization, or surgery are detected earlier by alterations in vital signs, or clinical parameters, than by scheduled hemoglobin determinations. In turn, establishing the threshold for indicating transfusion in stable patients without active bleeding at 7 g/dL or 21% hematocrit significantly reduces the need for determinations.

Therefore, serial checks after the first 24h, where failures of conservative treatment accumulate, do not appear to provide benefits to the patient, unless alterations in vital signs persist. They should, therefore, be considered complementary to vital sign monitoring and not independent of it^(3-5, 28-33).

Recommendation 11: Imaging studies. General recommendation

The complication rate of conservative treatment for solid organ injuries is between 0.3-23%⁽⁴⁾, requiring treatment for those symptomatic complications that do not evolve toward spontaneous resolution.

For this reason, since the APSA guidelines of 2000, imaging follow-up is not recommended for stable and asymptomatic patients, because it does not translate into changes in treatment, and should be considered complementary tests to monitoring of vital signs and the patient's clinical situation, just like laboratory tests^(3-5,7,8,10,34-36).

Recommendation 12: Imaging follow-up. Special recommendation

Each center must define its approach to pseudoaneurysms. The prevalence of these lesions seems to be around 7%, with up to 25% requiring urgent embolization or surgery³⁷.

Several authors agree on indicating treatment for asymptomatic urinomas that progress or do not resolve during follow-up, necessitating imaging follow-up^{18,26,28,38,39}.

Recommendation 13: Duration of physical activity restriction

The vast majority of studies and guidelines maintain the APSA recommendation from 2000, which is based on the grade of injury observed on the initial imaging test^(3,4,10,14,20,21,26,29,31,34). However, studies with shorter restriction periods have also been published^(8,40,41).

Recommendation 14: Home observation

This recommendation was based on the usual recommendations after any surgery, the data evaluated in recommendation 7, and a retrospective study⁽²⁰⁾ that implemented this same recommendation in its care protocol.

Recommendation 15: Return to school

Ordinary school activity does not involve physical activity; therefore, return to school should not be restricted, once the period of home observation has been completed. In fact, several studies support the safety of an early return to school^(3,8,10,15,19,20,31,40). However, in the case of patients without sufficient maturity, situations in which physical activity is performed unconsciously or that could lead to new trauma to the injured areas should be avoided.

Recommendation 16: Types of sport

The 2000 APSA recommendation established an ambiguous and subjective difference between physical activity and contact sports for its restrictions. While for physical activity the restriction was "grade +2 weeks," contact sports, for which only a few examples were given

(American football, wrestling, hockey, etc.), were left to the surgeon's discretion.

This definition is problematic, equivocal, and impractical, given that differences in the intensity with which the sport is practiced may exist.

It was proposed to unify the restriction to "grade +2 weeks" for all types of sport, as it has been shown to be safe^(4,5,14,19-21,26,40,41) and the objective of prohibiting higher intensity sports is not to prevent exercise itself, but to prevent the patient from reinjuring themselves (a precaution for which there would be no time limit).

Recommendation 17: Renal trauma and Pediatric Urology sections

The early involvement of Pediatric Urology sections was considered advisable, given the experience of several centers^(14,25,26,28,39,42) and the recommendations from 2 literature reviews on prioritizing endourological management for complications secondary to renal trauma in pediatric patients^(18,38). Furthermore, the presence of congenital anomalies of the urinary tract can result in important nuances for the treatment and follow-up of patients.

The two suggestions that did not reach the level of recommendation, regarding discharge criteria and the duration of absolute bed rest, caused a division among the panelists. Approximately half of them rejected these suggestions, according to their own qualitative comments, based on their opinion that the North American system (the main source of evidence for these measures) and the Spanish system are not superimposable for various reasons: The existence of trauma centers and even pediatric trauma centers in the U.S.⁽⁴³⁾, a private and co-payment system that could justify the desire not to prolong the stay, long distances to trauma centers⁽⁴⁴⁾, difficulties in balancing family and work life with home rest, or existing differences in available oral analgesics between both countries⁽⁴⁵⁾.

Although the Delphi method offers a flexible approach (allowing the participation of experts to be reconciled with their responsibilities and geographical dispersion) and an anonymous one (enabling the assessment of the items under study without biases derived from interpersonal dynamics such as peer pressure or bandwagon bias), it is necessary to mention that every methodology has its limitations.

Despite efforts by the coordination and even using statistical methods to describe the results, it is not possible to guarantee a complete absence of bias in the information distributed, both in the initial review and in the voting rounds.

Regarding the bibliographic review, a systematic review of the literature was not conducted because two such reviews on the issues to be addressed in the consensus had been recently published (2019⁽⁴⁾ and 2023⁽⁵⁾). However, it was decided to supplement the review with contributions from the coordination and the experts themselves, to miti-

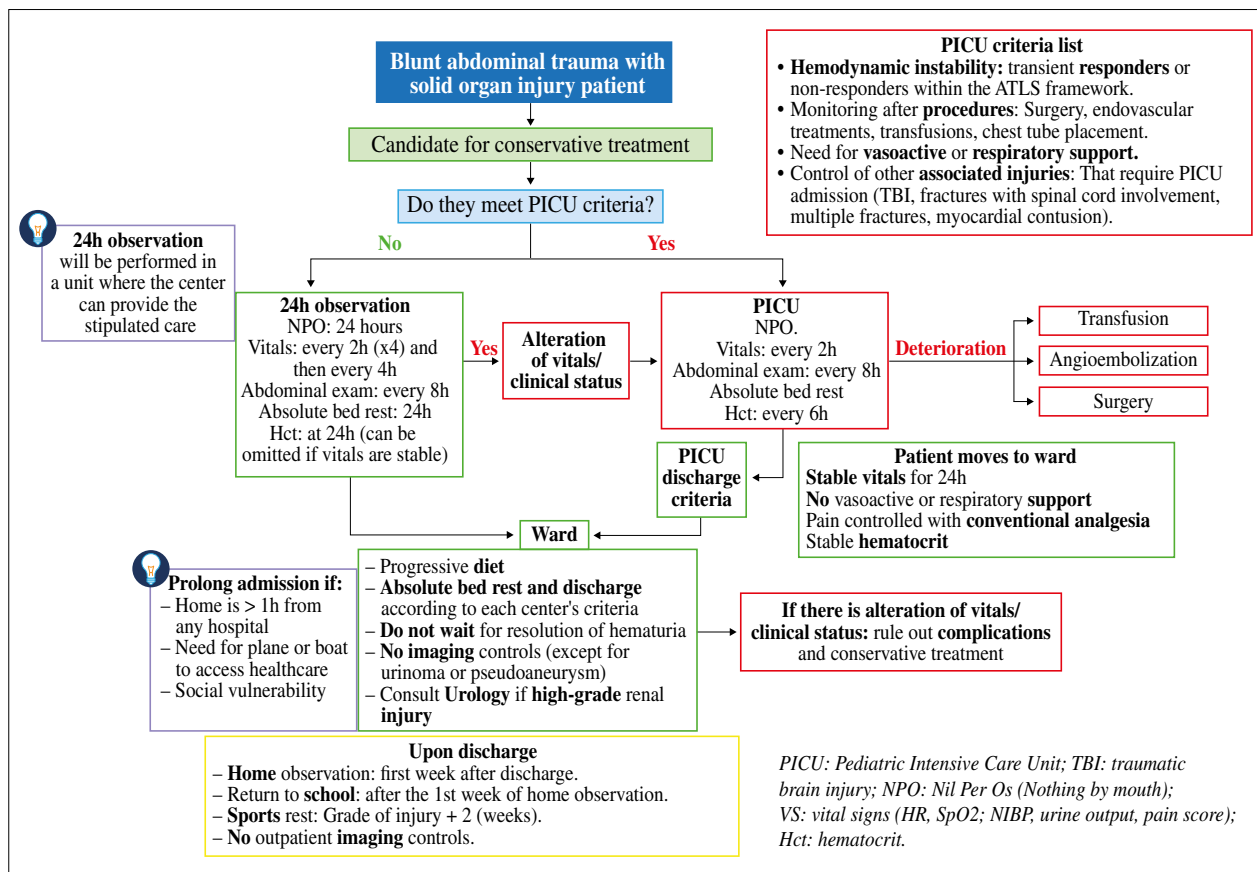


Figure 2. Integrating algorithm for the consensus recommendations (created with Lucidchart®). Each center must adapt the recommendations to its resources and personnel.

gate the risk of relevant omissions published between the last review and the current period. Nevertheless, given the results of the qualitative phase and the trends observable in the literature, we consider the omission of relevant publications for the development of this document unlikely despite the selected methodology.

On the other hand, there is also no clearly established threshold for defining a consensus a priori in this matter, so we used the range of an agreement proportion of 70% with an RIR < 40%, as these are values frequently used in this type of study and, moreover, recently used in a consensus for the development of a checklist for initial pediatric trauma care⁽⁴⁶⁾. In any case, all suggestions that progressed to the recommendation level widely exceeded this threshold.

This is the first consensus developed and sponsored by the Spanish Society of Pediatric Surgery itself, in response to the needs raised by the members of the society in their usual clinical practice. In this sense, we consider the inclusion of experts from 11 different institutions to be one of the strengths of this document, as it will help generalize and apply the recommendations, which we organized in the algorithm shown in Figure 2.

Finally, it should be emphasized that this consensus aims to facilitate decision-making, but it does not replace the clinical judgment of healthcare professionals who must individualize the recommendations to the circumstances of each patient and the local resources of the institutions.

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